# OCCUPANT CLASSIFICATION SYSTEM

## PRECAUTION

**1. INSPECTION PROCEDURE FOR VEHICLE INVOLVED IN ACCIDENT**

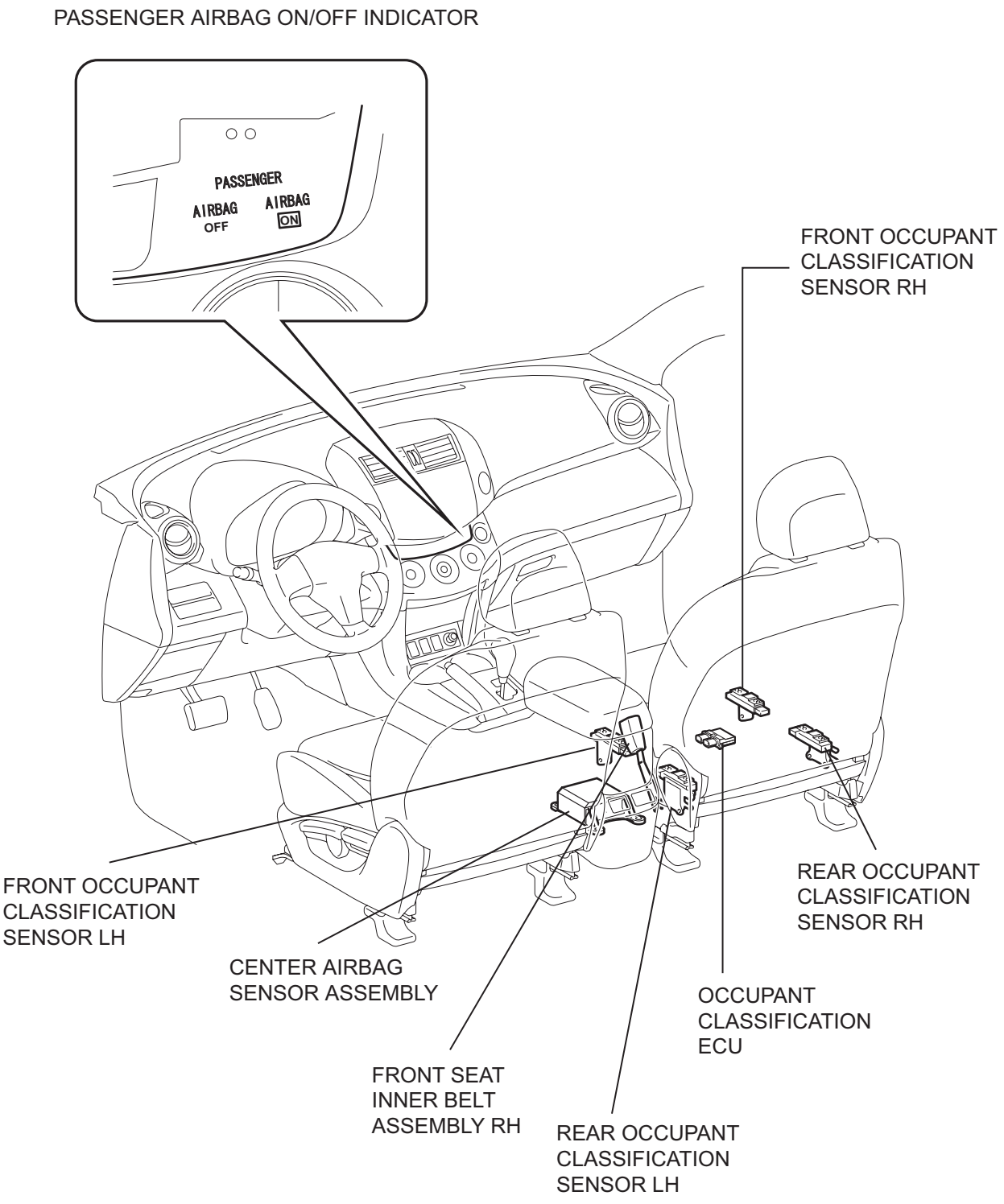
(a) Perform the zero point calibration and sensitivity check if any of the following conditions apply.

- The occupant classification ECU is replaced.
- Accessories (seat cover etc.) are installed.
- The front passenger seat is removed from the vehicle.
- The passenger airbag ON/OFF indicator (OFF) comes on when the front passenger seat is not occupied.
- The vehicle is brought to the workshop for repair due to an accident or a collision.

**NOTICE:**

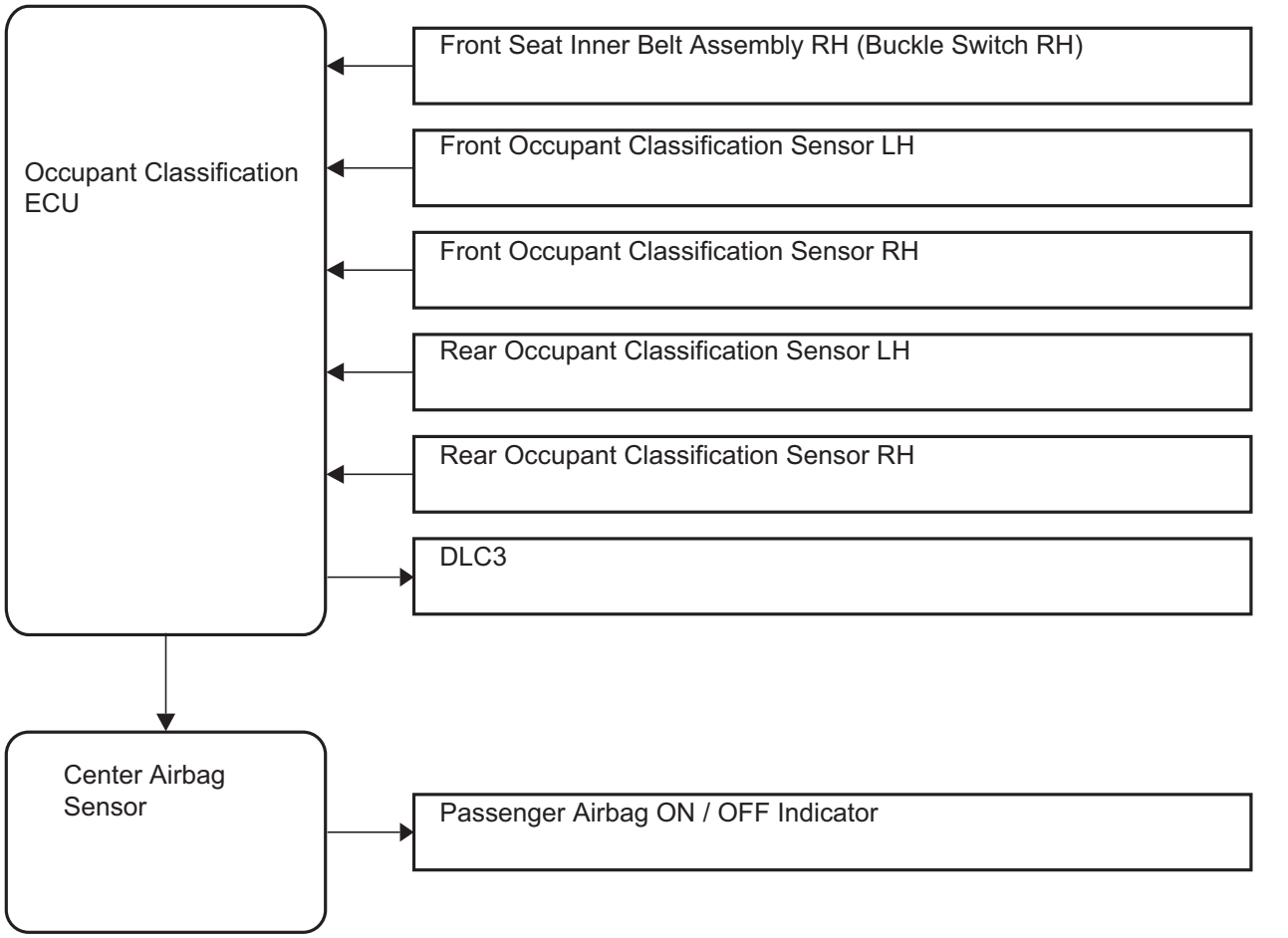
**When a vehicle involved in an accident is brought into the workshop for repair, check the flatness of the floor where the front passenger seat is mounted. If the flatness is not within +-3.0 mm (+-0.118 in.), adjust it to the specified range.**

# PARTS LOCATION




RS

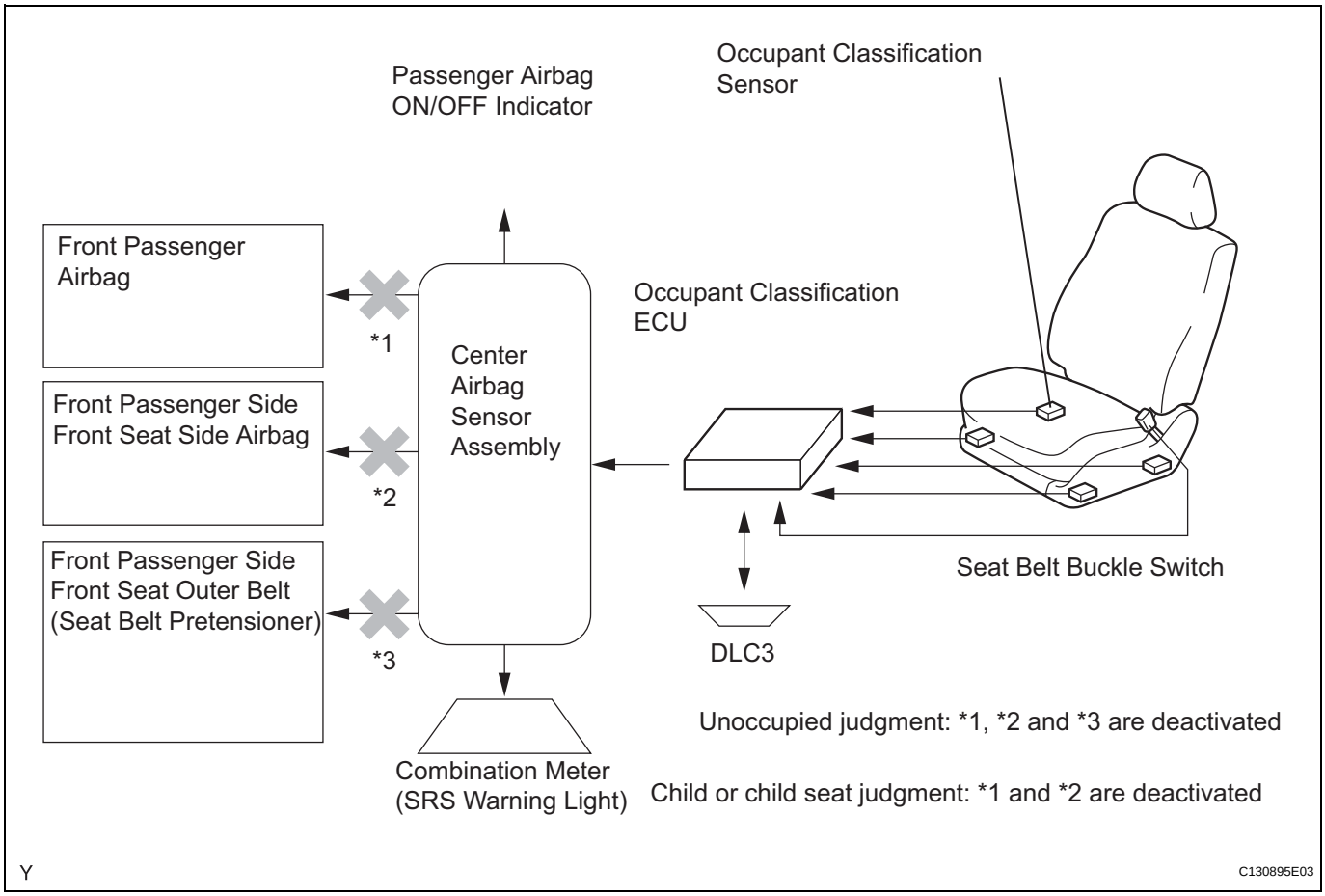
# SYSTEM DIAGRAM



# SYSTEM DESCRIPTION

## 1. GENERAL

(a) The front passenger occupant classification system judges whether the front passenger seat is occupied or not in accordance with the seat belt buckle status; and whether the seat is occupied by an adult or child (with child seat) in accordance with the load that is applied to the front passenger seat. Thus, when appropriate, it restricts the deployment of the front passenger airbag, front passenger side airbag, and the front passenger seat belt pretensioner. In addition, the system informs the driver of the result of the judgment through the use of the airbag ON/OFF indicator.




## 2. MAIN COMPONENTS

| Component | Description |
|---|---|
| Occupant Classification Sensor | Outputs voltages to occupant classification ECU in accordance with load applied to sensor |
| Occupant Classification ECU | Constantly monitors weight of front passenger seat load, and judges occupancy condition in accordance with signals from occupant classification sensors and seat belt buckle switch |
| Passenger Airbag ON/OFF Indicator | Passenger airbag ON indicator illuminates when front passenger and front passenger side airbags activated. Airbag OFF indicator illuminates when front passenger and front passenger side airbags deactivated. |
| Seat Belt Buckle Switch | Detects whether seat belt is fastened and outputs appropriate signals to occupant classification ECU |

# HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

- Use the following procedures to troubleshoot the occupant classification system.
- *: Use the intelligent tester.

| | |
|---|---|
| 1 | VEHICLE BROUGHT TO WORKSHOP |

NEXT

| | |
|---|---|
| 2 | PASSENGER AIRBAG ON/OFF INDICATOR CHECK |

NEXT

| | |
|---|---|
| 3 | DTC CHECK (Present and Past DTC)* |

(a) Check for DTCs (see page RS-249 ).

**Result**

| Result | Proceed to |
|---|---|
| DTC is output. | A |
| DTC is not output. | B |

B → GO TO PROBLEM SYMPTOMS TABLE

A

RS

| | |
|---|---|
| 4 | DTC CHART |

NEXT

| | |
|---|---|
| 5 | REPAIR OR REPLACEMENT |

NEXT

| | |
|---|---|
| 6 | DTC CLEARANCE (Present and Past DTCs)* |

(a) Clear the DTCs (see page RS-249).

NEXT

| | |
|---|---|
| 7 | DTC CHECK (Present and Past DTCs)* |

(a) Check for DTCs (see page RS-249 ).

**Result**

| Result | Proceed to |
|---|---|
| DTC is not output. | A |
| DTC is output. | B |

B → Go to step 5

A

**8 PROBLEM SYMPTOMS SIMULATION**

(a) Check the passenger airbag ON/OFF indicator condition (see page RS-246).

**Result**

| Result | Proceed to |
|---|---|
| Passenger airbag ON/OFF indicator is operating normally. | A |
| Passenger airbag ON/OFF indicator (OFF) is not operating normally. | B |

B → Go to step 5

A

**9 CONFIRMATION TEST**

NEXT

END

# INITIALIZATION

**1. ZERO POINT CALIBRATION**

**NOTICE:**

**Make sure that the front passenger seat is not occupied before performing the operation.**

HINT:

Perform the zero point calibration and sensitivity check if any of the following conditions apply.

- The occupant classification ECU is replaced.
- Accessories (seat cover etc.) are installed.
- The front passenger seat is removed from the vehicle.
- The passenger airbag ON/OFF indicator (OFF) comes on when the front passenger seat is not occupied.
- The vehicle is brought to the workshop for repair due to an accident or a collision.

(a) Zero point calibration and sensitivity check procedures:

HINT:

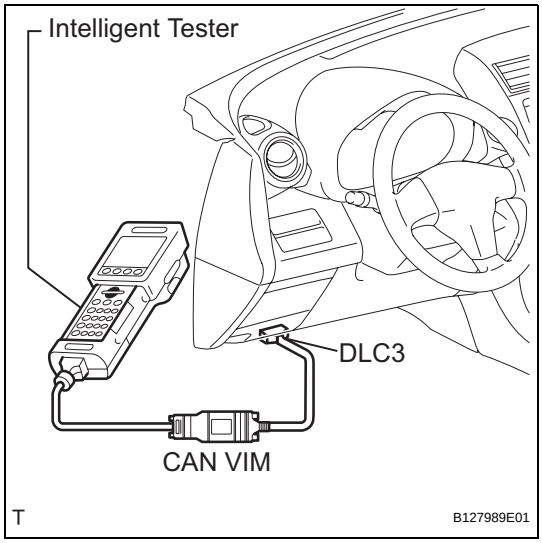
Make sure that the zero point calibration has finished normally, and then perform the sensitivity check.

(1) Adjust the seat position in accordance with the table below.

| Adjustment Item | Position |
|---|---|
| Slide Direction | Rearmost position |
| Reclining Angle | Upright position |
| Headrest Height | Lowest position |
| Lifter Height | Lowest position |

(2) Connect the intelligent tester (with CAN VIM) to the DLC3.

(3) Turn the ignition switch ON.

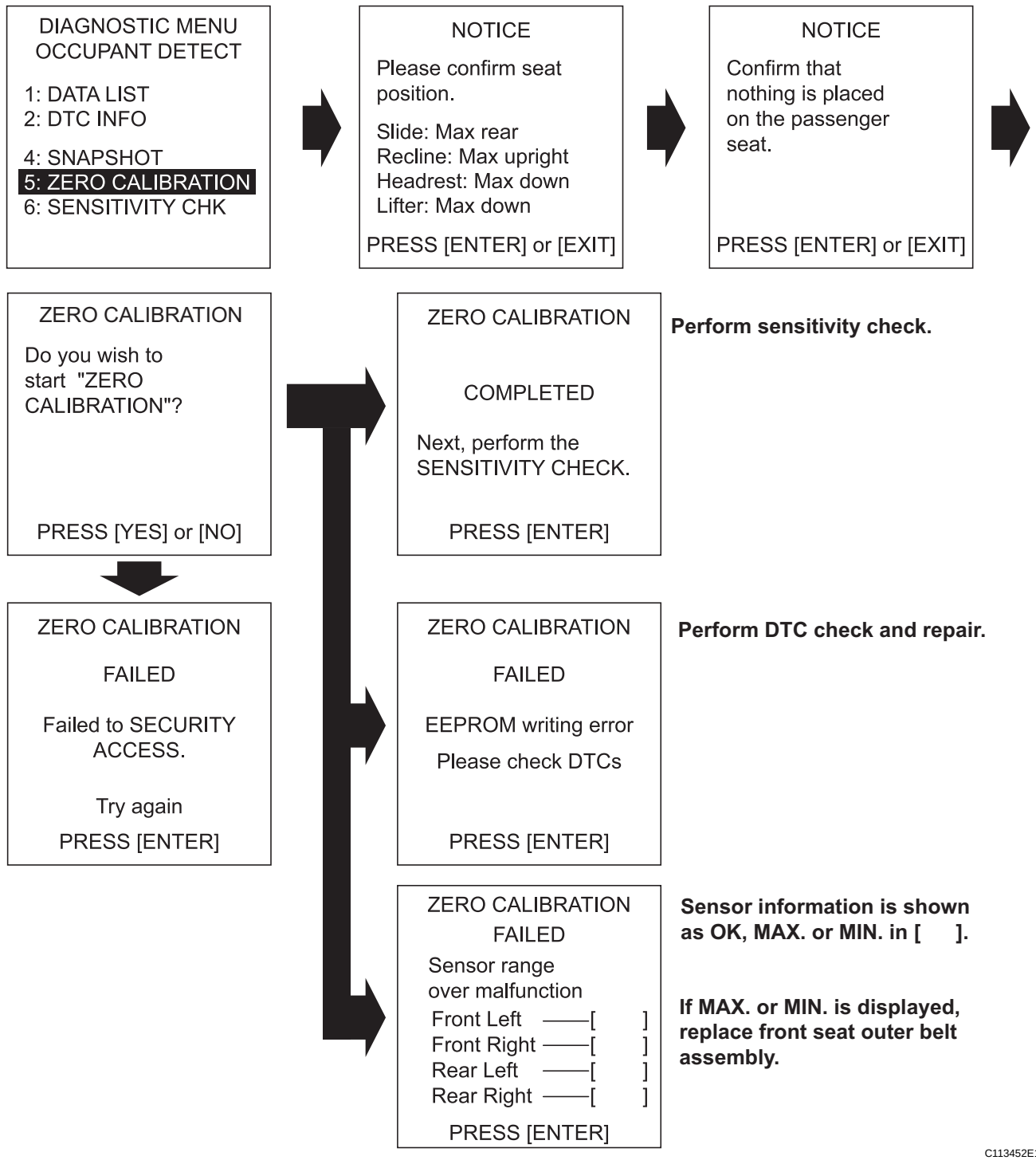



RS

(4) Perform the zero point calibration by following the prompts on the tester screen.

**ZERO POINT CALIBRATION PROCEDURE**

1: DIAGNOSIS - 1: OBD/MOBD - MODEL YEAR - MODEL SELECTION - 9: OCCUPANT DETECT
Refer to the following screen flowchart.




HINT:
Refer to the intelligent tester operator's manual for further details.

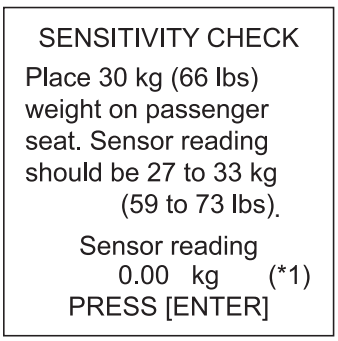
RS

**OK:**
**COMPLETED is displayed.**

(5) Perform the sensitivity check by following the prompts on the tester screen.
(6) Confirm that the beginning sensor reading is within the standard range.
**Standard range:**
**-3.2 to 3.2 kg (-7 to 7 lb)**
(7) Place a 30 kg (66.14 lb) weight (e.g. a lead mass) onto the front passenger seat.
(8) Confirm that the sensitivity is within the standard range.

SENSITIVITY CHECK PROCEDURE

1: DIAGNOSIS ⟶ 1: OBD/MOBD ⟶ MODEL YEAR ⟶ MODEL SELECTION ⟶ 9: OCCUPANT DETECT


*1: The unit can be changed by entering the following menu items on an intelligent tester.

[Unit Selection Screen]

1: DIAGNOSIS ⟶ 9: SETUP ⟶ 4: UNIT CONVERSION

⟶ WEIGHT (kg = lbs)

C C130896E02

**Standard range:**
**27 to 33 kg (59.52 to 72.75 lb)**

HINT:

- When performing the sensitivity check, use a solid metal weight (the check result may not be accurate if a liquid weight is used).

- If the sensitivity deviates from the standard range, retighten the bolts of the front passenger seat taking care not to deform the seat rail. After performing this procedure, if the sensitivity is not within the standard range, replace the front seat assembly RH.
- If the zero point calibration has not finished normally, replace the front seat assembly RH.

# PROBLEM SYMPTOMS TABLE

HINT:

- Use the table below to help determine the cause of the problem symptom. The potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.
- Proceed to the troubleshooting procedures for each circuit in the table below.

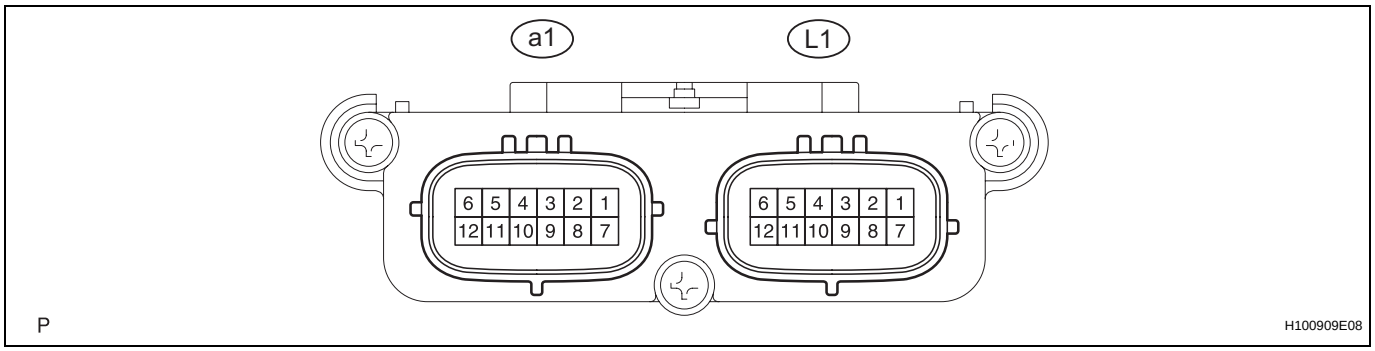
**Occupant classification ECU**

| Symptom | Suspected area | See page |
|---|---|---|
| The front passenger seat condition differs from the indication of the passenger airbag ON/OFF indicator (DTC is not output). | Trouble in Passenger Airbag ON/OFF Indicator | RS-328 |

# TERMINALS OF ECU

**1. CHECK OCCUPANT CLASSIFICATION ECU**

(a) Measure the voltage of the connector.




| Symbols (Terminal No.) | Wiring Color | Terminal Description | Condition | Specified Condition |
|---|---|---|---|---|
| +B (L1-1) - GND (L1-3) | R - W - B | +B power source | Always | 10 to 14 V |
| DIA (L1-2) - GND (L1-3) | W - W - B | Diagnosis (DLC3) | Ignition switch ON | Pulse generation |
| GND (L1-3) - Body ground | W-B - Body ground | Ground | Always | Below 1 Ω |
| FSR- (L1-4) - GND (L1-3) | O - W - B | Center airbag sensor communication line | Always | Below 1 Ω |
| BGND (L1-5) - GND (L1-3) | BR - W - B | Passenger side buckle switch ground line | Always | Below 1 Ω |
| IG (L1-7) - GND (L1-3) | B - W - B | IG power source | Ignition switch ON | 10 to 14 V |
| FSR+ (L1-8) - FSR- (L1-4) | V - O | Center airbag sensor communication line | Ignition switch ON | Pulse generation |
| BSW (L1-9) - BGND (L1-5) | GR - BR | Passenger side buckle switch line | Buckle switch ON<br>Buckle switch OFF | Pulse generation |
| SGD1 (a1-1) - GND (L1-3) | G - W-B | Front occupant classification sensor LH ground line | Always | Below 1 Ω |
| SGD2 (a1-2) - GND (L1-3) | O - W-B | Front occupant classification sensor RH ground line | Always | Below 1 Ω |
| SGD3 (a1-3) - GND (L1-3) | W - W-B | Rear occupant classification sensor LH ground line | Always | Below 1 Ω |
| SGD4 (a1-4) - GND (L1-3) | BR - W-B | Rear occupant classification sensor RH ground line | Always | Below 1 Ω |
| SVC1 (a1-11) - SGD1 (a1-1) | R - G | Front occupant classification sensor LH power supply line | Ignition switch ON, a load is applied to front occupant classification sensor LH | 4.5 to 5.1 V |
| SVC2 (a1-12) - SGD2 (a1-2) | W - O | Front occupant classification sensor RH power supply line | Ignition switch ON, a load is applied to front occupant classification sensor RH | 4.5 to 5.1 V |
| SVC3 (a1-5) - SGD3 (a1-3) | GR - W | Rear occupant classification sensor LH power supply line | Ignition switch ON, a load is applied to rear occupant classification sensor LH | 4.5 to 5.1 V |
| SVC4 (a1-6) - SGD4 (a1-4) | V - BR | Rear occupant classification sensor RH power supply line | Ignition switch ON, a load is applied to rear occupant classification sensor RH | 4.5 to 5.1 V |
| SIG1 (a1-7) - SGD1 (a1-1) | SB - G | Front occupant classification sensor LH signal line | Ignition switch ON, a load is applied to front occupant classification sensor LH | 0.2 to 4.7 V |

| Symbols (Terminal No.) | Wiring Color | Terminal Description | Condition | Specified Condition |
|---|---|---|---|---|
| SIG2 (a1-8) - SGD2 (a1-2) | L - O | Front occupant classification sensor RH signal line | Ignition switch ON, a load is applied to front occupant classification sensor RH | 0.2 to 4.7 V |
| SIG3 (a1-9) - SGD3 (a1-3) | Y - W | Rear occupant classification sensor LH signal line | Ignition switch ON, a load is applied to rear occupant classification sensor LH | 0.2 to 4.7 V |
| SIG4 (a1-10) - SGD4 (a1-4) | R - BR | Rear occupant classification sensor RH signal line | Ignition switch ON, a load is applied to rear occupant classification sensor RH | 0.2 to 4.7 V |

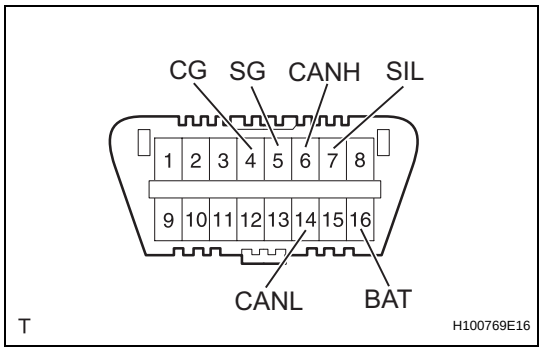
# DIAGNOSIS SYSTEM

## 1. DESCRIPTION

The occupant classification ECU controls the functions of the occupant classification system on the vehicle. Data of the occupant classification system can be read in the Data Link Connector 3 (DLC3) of the vehicle. When the system seems to be malfunctioning, use the intelligent tester to check for a malfunction and perform repairs.

## 2. CHECK DLC3

The ECU uses ISO 15765-4 for communication. The terminal arrangement of the DLC3 complies with ISO 15031-3 and matches the ISO 15765-4 format.




| Symbols (Terminal No.) | Terminal Description | Condition | Specified Condition |
|---|---|---|---|
| SIL (7) - SG (5) | Bus + line | During transmission | Pulse generation |
| CG (4) - Body ground | Chassis ground | Always | Below 1 Ω |
| SG (5) - Body ground | Signal ground | Always | Below 1 Ω |
| BAT (16) - Body ground | Battery positive | Always | 11 to 14 V |
| CANH (6) - CANL (14) | HIGH-level CAN bus line | Ignition switch OFF* | 54 to 69 Ω |
| CANH (6) - Battery positive | HIGH-level CAN bus line | Ignition switch OFF* | 1 MΩ or higher |
| CANH (6) - CG (4) | HIGH-level CAN bus line | Ignition switch OFF* | 200 Ω or higher |
| CANL (14) - Battery positive | LOW-level CAN bus line | Ignition switch OFF* | 1 MΩ or higher |
| CANL (14) - CG (4) | LOW-level CAN bus line | Ignition switch OFF* | 200 Ω or higher |

**NOTICE:**

***: Before measuring the resistance, leave the vehicle as is for at least 1 minute and do not operate the ignition switch, any switches or doors.**

If the result is not as specified, the DLC3 may have a malfunction. Repair or replace the harness and connector.

HINT:

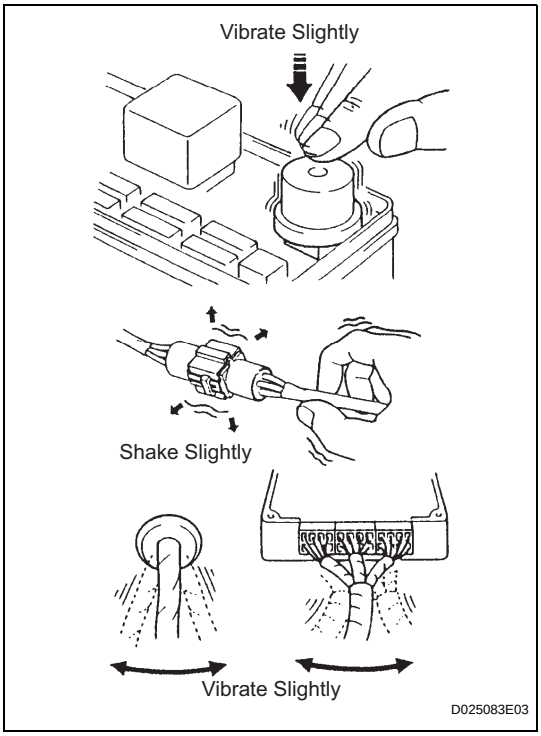
Connect the cable of the intelligent tester (with CAN VIM) to the DLC3, turn the ignition switch ON and attempt to use the tester. If the display indicates that a communication error has occurred, there is a problem either with the vehicle or with the tester.

- If communication is normal when the tester is connected to another vehicle, inspect the DLC3 on the original vehicle.
- If communication is still not possible when the tool is connected to another vehicle, the problem is probably in the tester itself. Consult the Service Department listed in the tester's instruction manual.

**3. SYMPTOM SIMULATION**

HINT:

The most difficult case in troubleshooting is when no symptoms occur. In such cases, a thorough customer problem analysis must be carried out. A simulation of the same or similar conditions and environment in which the problem occurred in the customer's vehicle should be carried out. No matter how much skill or experience a technician has, troubleshooting without confirming the problem symptoms will lead to important repairs being overlooked and mistakes or delays.




(a) Vibration method:

When vibration seems to be the major cause.

HINT:

Perform the simulation method only during the primary check period (for approximately 6 seconds after the ignition switch is turned ON).

(1) Slightly vibrate the part of the sensor considered to be the cause of the problem with your fingers and check whether the malfunction occurs.

HINT:

Shaking the relays too strongly may result in open relays.

(2) Slightly shake the connector vertically and horizontally.

(3) Slightly shake the wire harness vertically and horizontally.

The connector joint and fulcrum of the vibration are the major areas to be checked thoroughly.

(b) Simulation method for DTC B1795:

Turn the ignition switch from the LOCK to the ON position, hold the position for 10 seconds, and then turn it back to the LOCK position again 50 times in a row.

HINT:

DTC B1795 is output if the occupant classification ECU receives the ignition switch LOCK-ON-LOCK signal 50 times in a row when a malfunction occurs in the power circuit for the occupant classification system.

**4. FUNCTION OF PASSENGER AIRBAG ON/OFF INDICATOR**

(a) Initial check

(1) Turn the ignition switch ON.

(2) The passenger airbag ON/OFF indicator (ON and OFF) comes on for approximately 4 seconds, then goes off for approximately 2 seconds.

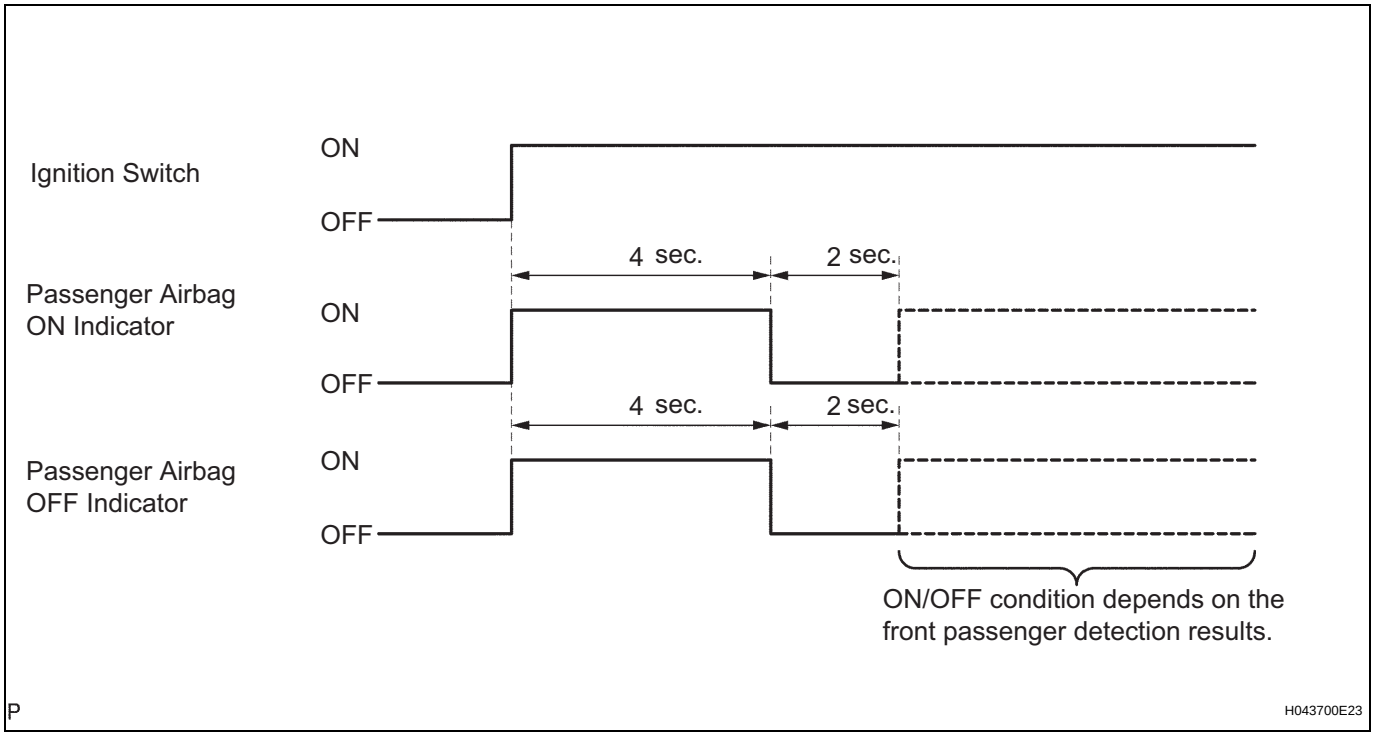
RS

(3) Approximately 6 seconds after the ignition switch is turned to the ON position, the passenger airbag ON/OFF indicator will be ON/OFF depending on the conditions listed below.

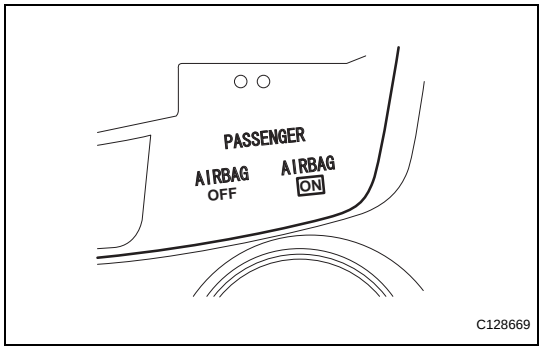
| Condition | ON Indicator | OFF Indicator |
|---|---|---|
| Vacant | OFF | OFF |
| Adult is seated | ON | OFF |
| Child is seated | OFF | ON |
| Child restraint system is set | OFF | ON |
| Front passenger occupant classification system failure | OFF | ON |

HINT:

- The passenger airbag ON/OFF indicator operates based on the timing chart below in order to check the indicator light circuit.




- When the occupant classification system has trouble, both the SRS warning light and the passenger airbag OFF indicator (OFF) come on. In this case, check the DTCs in the airbag system first.




**5. CHECK PASSENGER AIRBAG ON/OFF INDICATOR**

(a) Turn the ignition switch ON.

(b) Check that the passenger airbag ON/OFF indicators come on for approximately 4 seconds, then go off for approximately 2 seconds.

HINT:

Refer to the table in the previous step regarding the passenger airbag ON/OFF indicator when approximately 6 seconds have elapsed after the ignition switch is turned to the ON position.

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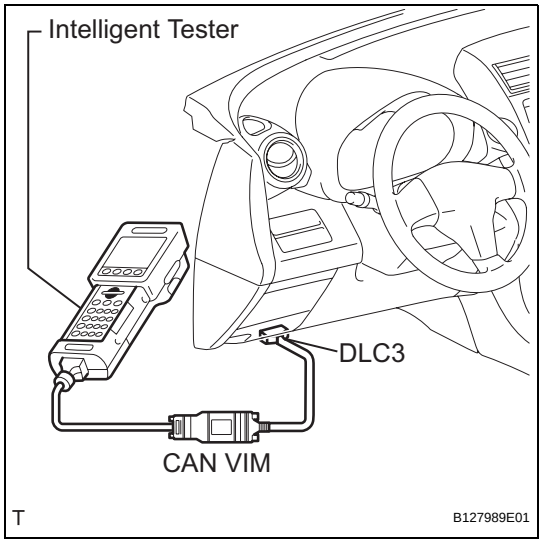
# DTC CHECK / CLEAR

**1. CHECK DTC**

HINT:

- When DTC B1650/23 is detected as a result of troubleshooting for the airbag system, troubleshoot the occupant classification system.
- Use the intelligent tester (with CAN VIM) to read and clear DTCs, otherwise the DTCs cannot be read and cleared.



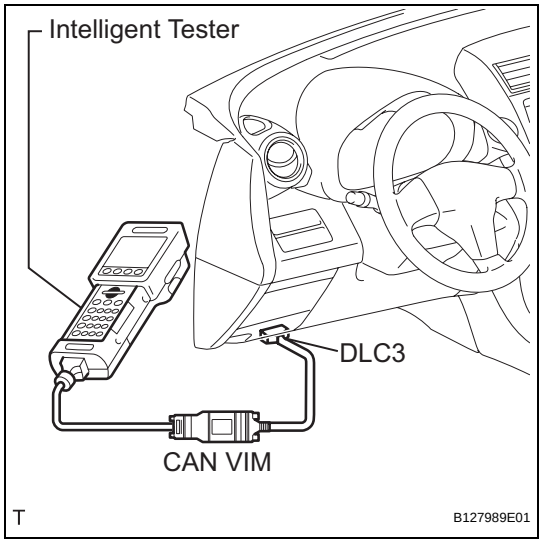

(a) Connect the intelligent tester (with CAN VIM) to the DLC3.
(b) Turn the ignition switch ON.
(c) Check for DTCs by following the prompts on the tester screen.
HINT:
Refer to the intelligent tester operator's manual for further details.

**2. Clear DTC**

(a) Connect the intelligent tester (with CAN VIM) to the DLC3.
(b) Turn the ignition switch ON.
(c) Clear the DTCs by following the prompts on the tester screen.
HINT:
Refer to the intelligent tester operator's manual for further details.

# DATA LIST / ACTIVE TEST

HINT:
Using the intelligent tester's DATA LIST allows switch, sensor, actuator and other item values to be read without removing any parts. Reading the DATA LIST early in troubleshooting is one way to save time.




**1. DATA LIST FOR OCCUPANT CLASSIFICATION ECU**

(a) Connect the intelligent tester (with CAN VIM) to the DLC3.
(b) Turn the ignition switch ON.
(c) Read the DATA LIST on the tester's screen.

**Occupant classification ECU**

| Item | Measurement Item/ Range (Display) | Normal Condition | Diagnostic Note |
|---|---|---|---|
| IG SW | Ignition switch condition/<br>ON: Ignition switch ON<br>OFF: Ignition switch OFF | ON/OFF | - |
| P BUCKLE SW | Buckle switch (Front passenger side)/<br>UNSET: Front passenger side seat belt is unfastened<br>SET: Front passenger side seat belt is fastened<br>NG: Front passenger side seat belt is malfunctioning | UNSET/SET | - |
| Front passenger CLASS | Front passenger classification/<br>AF05: Adult (36 to 54 kg (79.37 to 119.05 lb)) is seated<br>AM50: Adult (more than 54 kg (119.05 lb)) is seated<br>CHILD: Child (less than 36 kg (79.37 lb)) is seated<br>CRS: Child restraint system and front passenger side buckle switch ON, then 7 to 36 kg (15.43 to 79.37 lb) is set<br>OFF: Vacant | AF05/AM50/CHILD/CRS/OFF | - |
| SENS RANGE INF | Sensor range information/<br>OK: The sensor value is within the range<br>NG: The sensor value is outside the range | OK | - |
| FL SENS RANGE | Front left sensor range information/<br>OK: Sensor range is -17 to 27 kg (-37.48 to 59.52 lb)<br>Min.: Less than -17 kg (-37.48 lb)<br>Max.: More than 27 kg (59.52 lb) | OK | - |

| Item | Measurement Item/ Range (Display) | Normal Condition | Diagnostic Note |
|---|---|---|---|
| FR SENS RANGE | Front right sensor range information/<br>OK: Sensor range is -17 to 27 kg (-37.48 to 59.52 lb)<br>Min.: Less than -17 kg (-37.48 lb)<br>Max.: More than 27 kg (59.52 lb) | OK | - |
| RL SENS RANGE | Rear left sensor range information/<br>OK: Sensor range is -17 to 37 kg (-37.48 to 81.57 lb)<br>Min.: Less than -17 kg (-37.48 lb)<br>Max.: More than 37 kg (81.57 lb) | OK | - |
| RR SENS RANGE | Rear right sensor range information/<br>OK: Sensor range is -17 to 37 kg (-37.48 to 81.57 lb)<br>Min.: Less than -17 kg (-37.48 lb)<br>Max.: More than 37 kg (81.57 lb) | OK | - |
| FL SENS VOL | Front left sensor voltage/<br>Min.: 0 V<br>Max.: 19.8 V | 0 to 4.7 V | - |
| FR SENS VOL | Front right sensor voltage/<br>Min.: 0 V<br>Max.: 19.8 V | 0 to 4.7 V | - |
| RL SENS VOL | Rear left sensor voltage/<br>Min.: 0 V<br>Max.: 19.8 V | 0 to 4.7 V | - |
| RR SENS VOL | Rear right sensor voltage/<br>Min.: 0 V<br>Max.: 19.8 V | 0 to 4.7 V | - |
| FL SENS WEIGHT | Front left sensor weight information/<br>Min.: -17 kg (-37.48 lb)<br>Max.: 27 kg (59.52 lb) | -17 to 27 kg (-37.48 to 59.52 lb) | - |
| FR SENS WEIGHT | Front right sensor weight information/<br>Min.: -17 kg (-37.48 lb)<br>Max.: 27 kg (59.52 lb) | -17 to 27 kg (-37.48 to 59.52 lb) | - |
| RL SENS WEIGHT | Rear left sensor weight information/<br>Min.: -17 kg (-37.48 lb)<br>Max.: 37 kg (81.57 lb) | -17 to 37 kg (-37.48 to 81.57 lb) | - |
| RR SENS WEIGHT | Rear right sensor weight information/<br>Min.: -17 kg (-37.48 lb)<br>Max.: 37 kg (81.57 lb) | -17 to 37 kg (-37.48 to 81.57 lb) | - |
| TOTAL WEIGHT | Total weight information/<br>Min.: -68 kg (-149.91 lb)<br>Max.: 128 kg (282.19 lb) | -68 to 128 kg (-149.91 to 282.19 lb) | - |
| #PRESENT CODES | Number of present DTCs<br>Min.: 0, Max.: 255 | 0 | - |
| #PAST CODES | Number of past DTCs<br>Min.: 0, Max.: 255 | 0 | - |

# DIAGNOSTIC TROUBLE CODE CHART

If a trouble code is displayed during the DTC check, check the circuit listed for the code in the table below (proceed to the page listed for that circuit).

## Occupant classification system

| DTC No. | Detection Item | Trouble Area | See page |
|---|---|---|---|
| B1771 | Passenger Side Buckle Switch Circuit Malfunction | 1. Floor wire<br>2. Front seat inner belt assembly (Buckle switch RH)<br>3. Occupant classification ECU | RS-254 |
| B1780 | Front Occupant Classification Sensor LH Circuit Malfunction | 1. Front seat wire RH<br>2. Front seat assembly RH (Front occupant classification sensor RH)<br>3. Occupant classification ECU | RS-260 |
| B1781 | Front Occupant Classification Sensor RH Circuit Malfunction | 1. Front seat wire RH<br>2. Front seat assembly RH (Front occupant classification sensor RH)<br>3. Occupant classification ECU | RS-267 |
| B1782 | Rear Occupant Classification Sensor LH Circuit Malfunction | 1. Front seat wire RH<br>2. Front seat assembly RH (Rear occupant classification sensor LH)<br>3. Occupant classification ECU | RS-274 |
| B1783 | Rear Occupant Classification Sensor RH Circuit Malfunction | 1. Front seat wire RH<br>2. Front seat assembly RH (Rear occupant classification sensor RH)<br>3. Occupant classification ECU | RS-281 |
| B1785 | Front Occupant Classification Sensor LH Collision Detection | 1. Front seat assembly RH (Front occupant classification sensor LH)<br>2. Occupant classification ECU | RS-288 |
| B1786 | Front Occupant Classification Sensor RH Collision Detection | 1. Front seat assembly RH (Front occupant classification sensor RH)<br>2. Occupant classification ECU | RS-292 |
| B1787 | Rear Occupant Classification Sensor LH Collision Detection | 1. Front seat assembly RH (Rear occupant classification sensor LH)<br>2. Occupant classification ECU | RS-296 |
| B1788 | Rear Occupant Classification Sensor RH Collision Detection | 1. Front seat assembly RH (Rear occupant classification sensor RH)<br>2. Occupant classification ECU | RS-300 |
| B1790 | Center Airbag Sensor Assembly Communication Circuit Malfunction | 1. Floor wire<br>2. Occupant classification ECU<br>3. Center airbag sensor assembly | RS-304 |
| B1793 | Occupant Classification Sensor Power Supply Circuit Malfunction | 1. Front seat wire RH<br>2. Front seat assembly RH (Occupant classification sensors)<br>3. Occupant classification ECU | RS-311 |
| B1794 | Open in Occupant Classification ECU Battery Positive Line | 1. Wire harness<br>2. Occupant classification ECU | RS-319 |
| B1795 | Occupant Classification ECU Malfunction | 1. Battery<br>2. ECU-B Fuse<br>3. No. 2 floor wire<br>4. Front seat inner belt RH<br>5. Occupant classification ECU | RS-323 |

| DTC No. | Detection Item | Trouble Area | See page |
|---|---|---|---|
| B1796 | Sleep Operation Failure of Occupant Classification ECU | Occupant classification ECU | RS-326 |

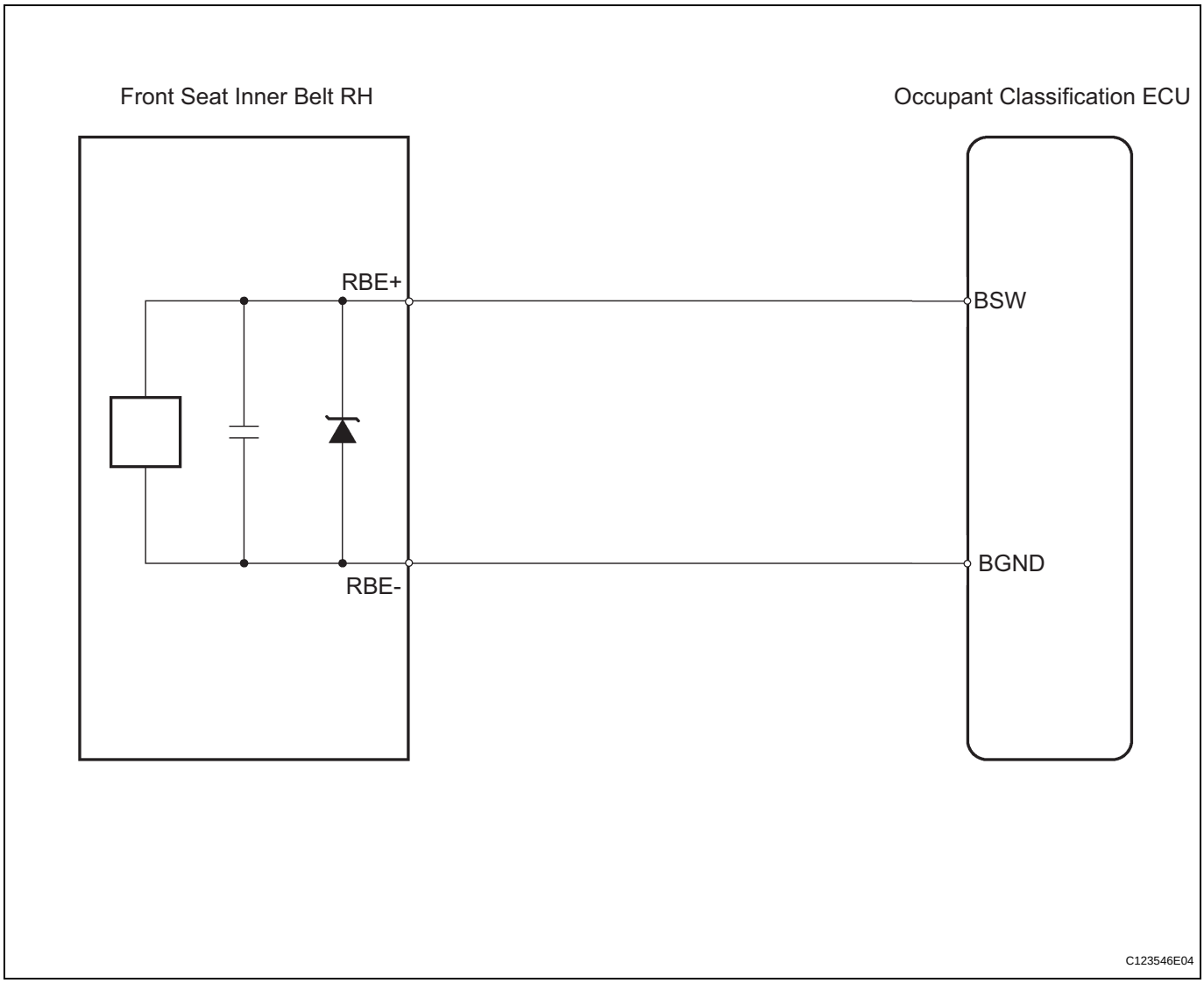
| DTC | B1771 | Passenger Side Buckle Switch Circuit Malfunction |
|---|---|---|

## DESCRIPTION

The passenger side buckle switch circuit consists of the occupant classification ECU and the front seat inner belt RH.
DTC B1771 is recorded when a malfunction is detected in the passenger side buckle switch circuit.
Troubleshoot DTC B1771 first when DTCs B1771 and B1795 are output simultaneously.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1771 | When one of following conditions is met:<br>• Occupant classification ECU detects line short signal, open signal, short to ground signal or short to B+ signal in the passenger side buckle switch circuit for 2 seconds<br>• Passenger side buckle switch malfunction<br>• Occupant classification ECU malfunction | • Floor wire<br>• Front seat inner belt RH (Buckle switch RH)<br>• Occupant classification ECU |

## WIRING DIAGRAM




RS

## INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see the undersurface of the seat cushion.
- In the above case, hold the seat so that it does not tip over. Holding the seat for a long period of time may cause a problem, such as seat rail deformation. Hold the seat up only for as long as necessary.

| 1 | CHECK FOR DTC |
|---|---|

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1771 is not output.**
HINT:
DTCs other than DTC B1771 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

| 2 | CHECK CONNECTION OF CONNECTOR |
|---|---|

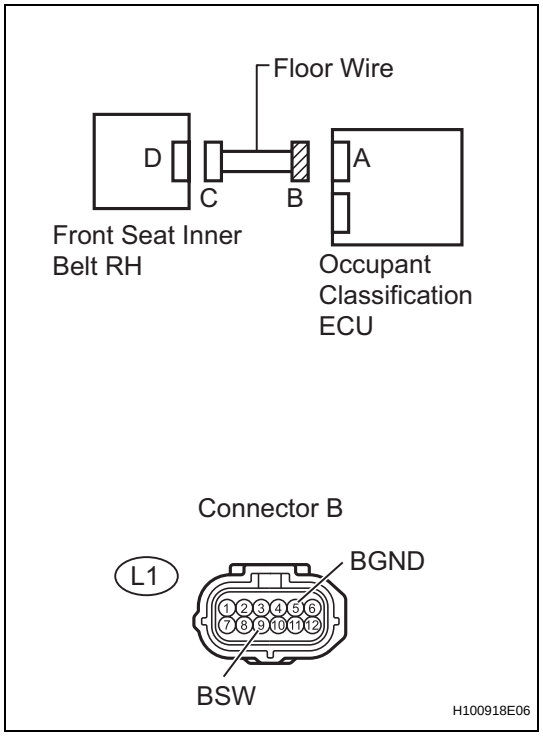
(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Check that the connectors are properly connected to the occupant classification ECU and the front seat inner belt RH.
**OK:**
**The connectors are properly connected.**

NG → **CONNECT CONNECTOR**

OK

RS

## 3 CHECK FLOOR WIRE (TO B+)



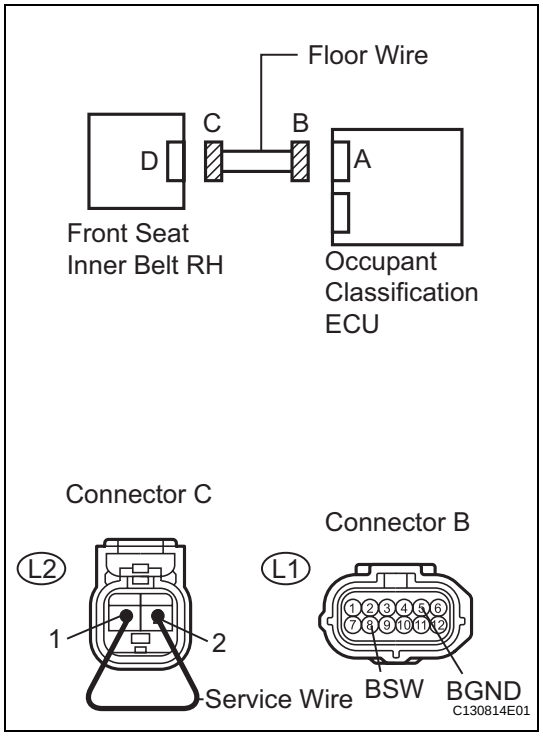

(a) Disconnect the connectors from the occupant classification ECU and the front seat inner belt RH.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Measure the voltage of the wire harness side connector.
**Standard voltage**

| Tester Connection | Specified Condition |
|---|---|
| L1-9 (BSW) - Body ground | Below 1 V |
| L1-5 (BGND) - Body ground | Below 1 V |

NG → **REPAIR OR REPLACE FLOOR WIRE**

OK

## 4 CHECK FLOOR WIRE (FOR OPEN)




(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Using a service wire, connect terminals L2-2 and L2-1 of connector C.
**NOTICE:**
**Do not forcibly insert a service wire into the terminals of the connector when connecting them.**
(d) Measure the resistance of the wire harness side connectors.
**Standard resistance**

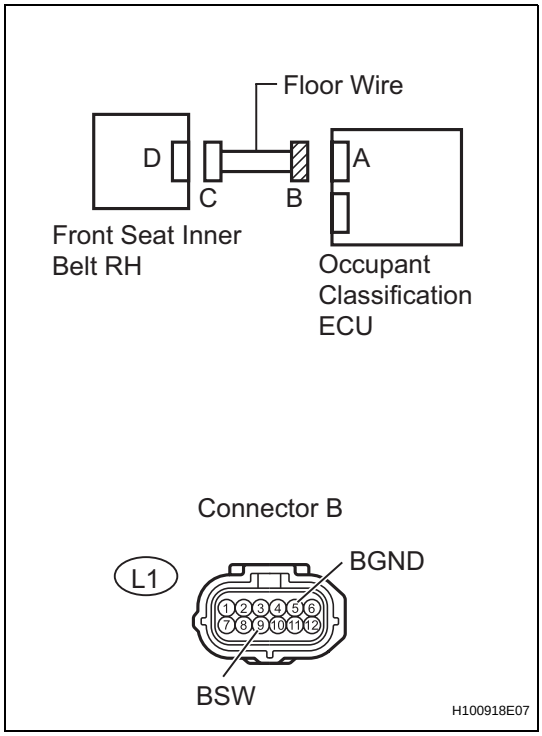
| Tester Connection | Specified Condition |
|---|---|
| L1-9 (BSW) - L1-5 (BGND) | Below 1 Ω |

NG → **REPAIR OR REPLACE FLOOR WIRE**

OK

RS

## 5 CHECK FLOOR WIRE (FOR SHORT)




(a) Disconnect the service wire from connector C.
(b) Measure the resistance of the wire harness side connector.

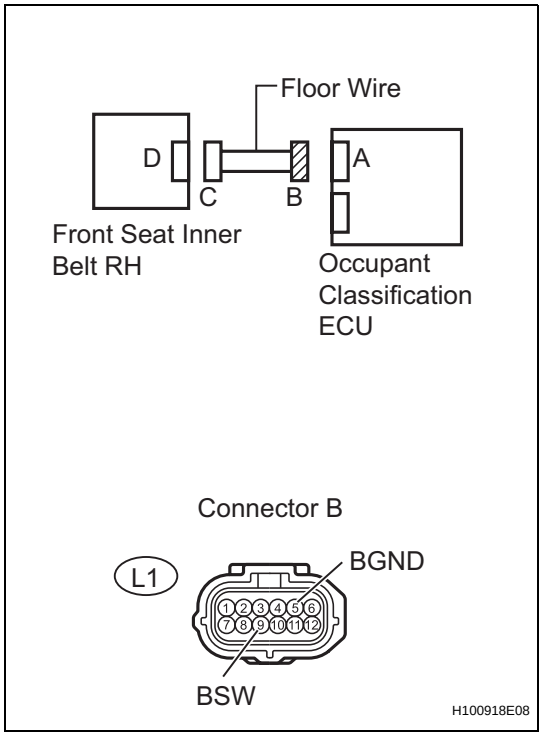
**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| L1-9 (BSW) - L1-5 (BGND) | 1 MΩ or higher |

**NG** → **REPAIR OR REPLACE FLOOR WIRE**

**OK**

## 6 CHECK FLOOR WIRE (TO GROUND)




(a) Measure the resistance of the wire harness side connector.

**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| L1-9 (BSW) - Body ground | 1 MΩ or higher |
| L1-5 (BGND) - Body ground | 1 MΩ or higher |

**NG** → **REPAIR OR REPLACE FLOOR WIRE**

**OK**

RS

| 7 | CHECK FOR DTC |
|---|---|

(a) Connect the connectors to the occupant classification ECU and the front seat inner belt RH.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(e) Turn the ignition switch OFF.
(f) Turn the ignition switch ON.
(g) Check the DTCs (see page RS-249).
**OK:**
**DTC B1771 is not output.**
HINT:
DTCs other than DTC B1771 may be output at this time, but they are not related to this check.

**OK** → **USE SIMULATION METHOD TO CHECK**

**NG**

| 8 | REPLACE FRONT SEAT INNER BELT ASSEMBLY RH |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the front seat inner belt RH (see page SB-21).
HINT:
Perform the inspection using parts from a normal vehicle if possible.
(d) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(e) Turn the ignition switch ON.
(f) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(g) Turn the ignition switch OFF.
(h) Turn the ignition switch ON.
(i) Check the DTCs (see page RS-249).
**OK:**
**DTC B1771 is not output.**
HINT:
DTCs other than DTC B1771 may be output at this time, but they are not related to this check.

**OK** → **END**

**NG**

| 9 | REPLACE OCCUPANT CLASSIFICATION ECU |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-392).

NEXT

| 10 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester (with CAN VIM) to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

| 11 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

RS

NEXT

END

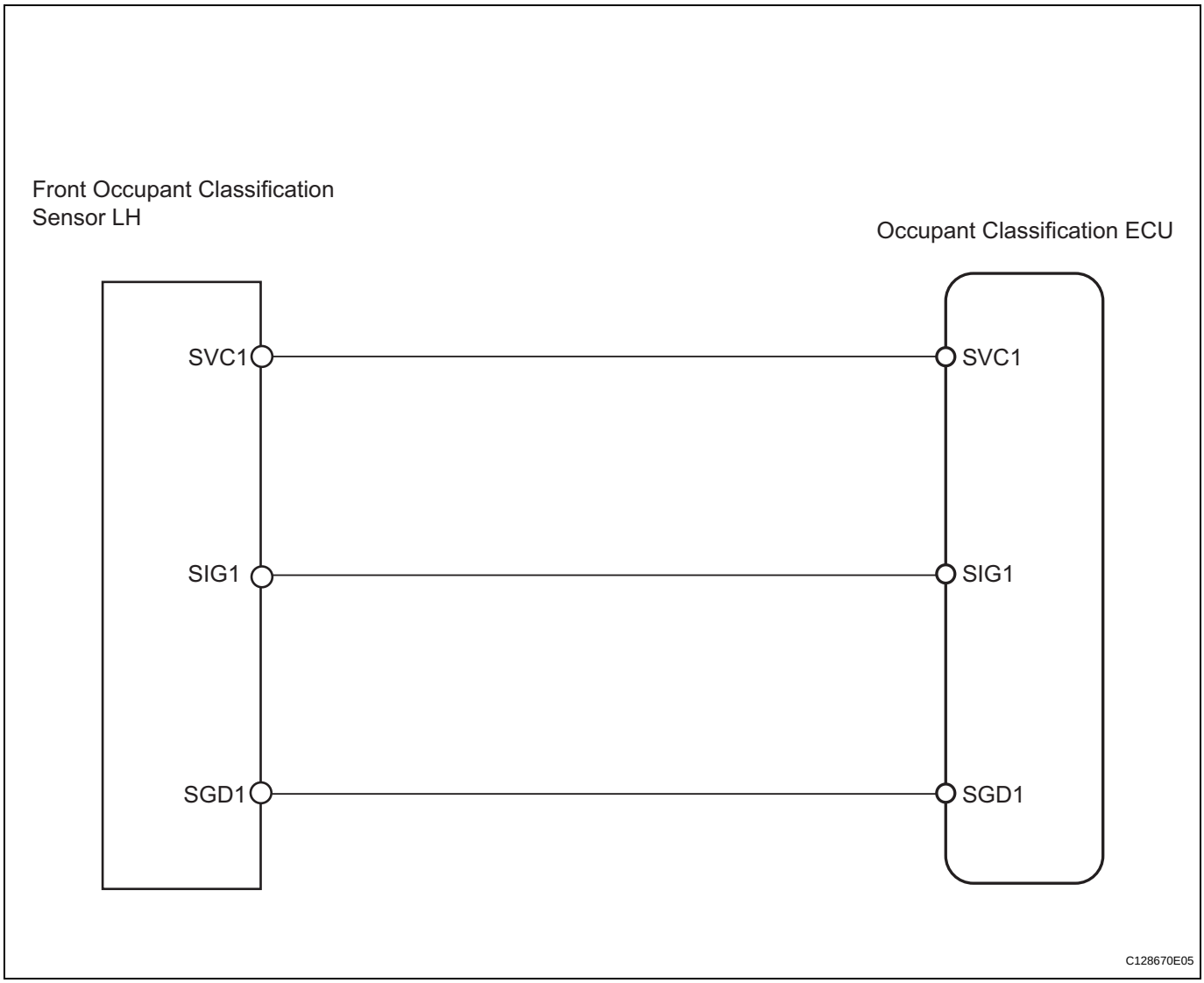
| DTC | B1780 | Front Occupant Classification Sensor LH Circuit Malfunction |
|---|---|---|

## DESCRIPTION

The front occupant classification sensor LH circuit consists of the occupant classification ECU and the front occupant classification sensor LH.
DTC B1780 is recorded when a malfunction is detected in the front occupant classification sensor LH circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1780 | When one of following conditions is met:<br>• Occupant classification ECU detects line short signal, open signal, short to ground signal or short to B+ signal in the front occupant classification sensor LH circuit for 2 seconds<br>• Front occupant classification sensor LH malfunction<br>• Occupant classification ECU malfunction | • Front seat wire RH<br>• Front seat RH (Front occupant classification sensor LH)<br>• Occupant classification ECU |

## WIRING DIAGRAM




RS

## INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see the undersurface of the seat cushion.
- In the above case, hold the seat so that it does not tip over. Holding the seat for a long period of time may cause a problem, such as seat rail deformation. Hold the seat up only for as long as necessary.

| 1 | CHECK FOR DTC |
|---|---|

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1780 is not output.**
HINT:
DTCs other than DTC B1780 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

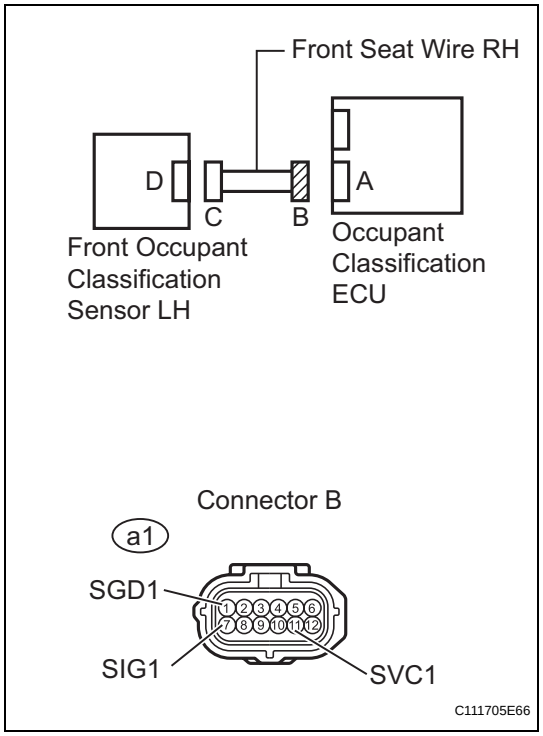
| 2 | CHECK CONNECTION OF CONNECTOR |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Check that the connectors are properly connected to the occupant classification ECU and the front occupant classification sensor LH.
**OK:**
**The connectors are properly connected.**

NG → **CONNECT CONNECTOR**

OK

## 3 CHECK FRONT SEAT WIRE RH (TO B+)



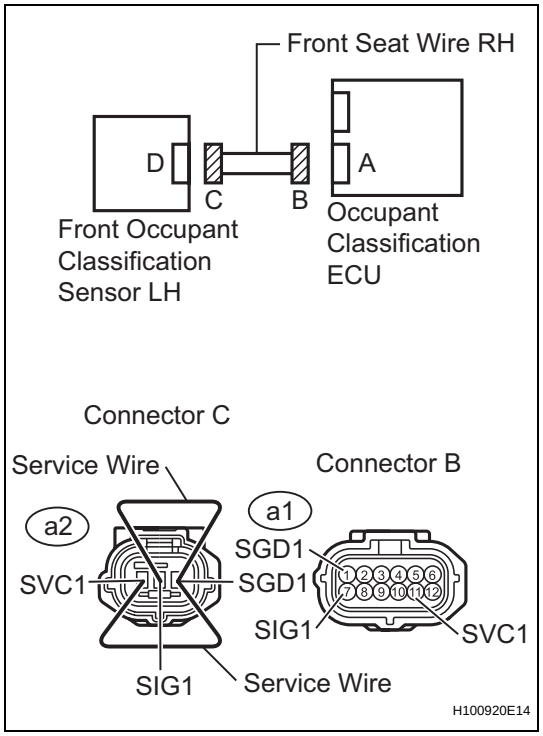

(a) Disconnect the connectors from the occupant classification ECU and the front occupant classification sensor LH.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Measure the voltage of the wire harness side connector.
**Standard voltage**

| Tester Connection | Specified Condition |
|---|---|
| a1-1 (SGD1) - Body ground | Below 1 V |
| a1-7 (SIG1) - Body ground | Below 1 V |
| a1-11 (SVC1) - Body ground | Below 1 V |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

## 4 CHECK FRONT SEAT WIRE RH (FOR OPEN)




(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Using a service wire, connect terminals a2-1 (SVC1) and a2-3 (SGD1), and connect terminals a2-2 (SIG1) and a2-3 (SGD1) of connector C.
**NOTICE:**
**Do not forcibly insert a service wire into the terminals of the connector when connecting them.**
(d) Measure the resistance of the wire harness side connector.
**Standard resistance**

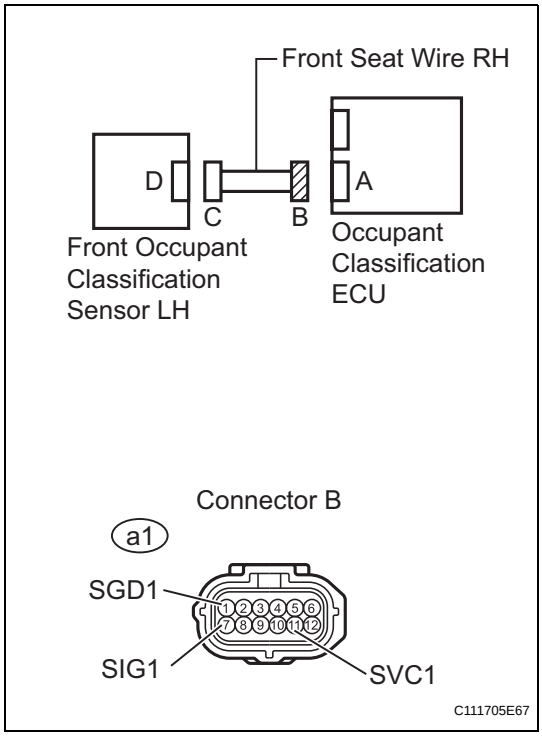
| Tester Connection | Specified Condition |
|---|---|
| a1-7 (SIG1) - a1-1 (SGD1) | Below 1 Ω |
| a1-11 (SVC1) - a1-1 (SGD1) | Below 1 Ω |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

RS

## 5 CHECK FRONT SEAT WIRE RH (FOR SHORT)




(a) Disconnect the service wire from connector C.
(b) Measure the resistance of the wire harness side connector.

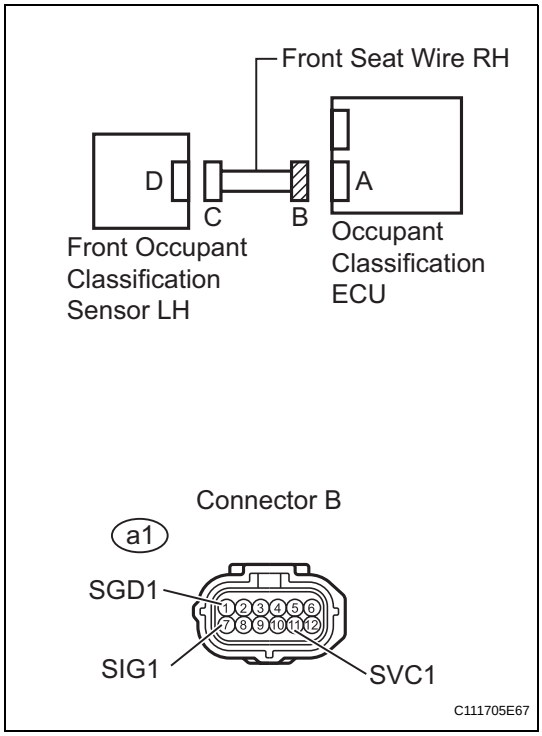
**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| a1-7 (SIG1) - a1-1 (SGD1) | 1 MΩ or higher |
| a1-11 (SVC1) - a1-1 (SGD1) | 1 MΩ or higher |
| a1-7 (SIG1) - a1-11 (SVC1) | 1 MΩ or higher |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

## 6 CHECK FRONT SEAT WIRE RH (TO GROUND)




(a) Measure the resistance of the wire harness side connector.

**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| a1-1 (SGD1) - Body ground | 1 MΩ or higher |
| a1-7 (SIG1) - Body ground | 1 MΩ or higher |
| a1-11 (SVC1) - Body ground | 1 MΩ or higher |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

RS

| 7 | CHECK FOR DTC |
|---|---|

(a) Connect the connectors to the occupant classification ECU and the front occupant classification sensor LH.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(e) Turn the ignition switch OFF.
(f) Turn the ignition switch ON.
(g) Check the DTCs (see page RS-249).
**OK:**
**DTC B1780 is not output.**
HINT:
DTCs other than DTC B1780 may be output at this time, but they are not related to this check.

| OK | USE SIMULATION METHOD TO CHECK |
|---|---|

NG

| 8 | REPLACE OCCUPANT CLASSIFICATION ECU |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-392).
HINT:
Perform the inspection using parts from a normal vehicle if possible.

NEXT

| 9 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester (with CAN VIM) to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

| NG | Go to step 12 |
|---|---|

OK

RS

| 10 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard values:**
**27 to 33 kg (59.52 to 72.75 lb)**

NG → **Go to step 12**

OK

| 11 | CHECK FOR DTC |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Turn the ignition switch ON.
(c) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(d) Turn the ignition switch OFF.
(e) Turn the ignition switch ON.
(f) Check the DTCs (see page RS-249).
**OK:**
**DTC B1780 is not output.**
HINT:
Codes other than DTC B1780 may be output at this time, but they are not related to this check.

OK → **END**

RS

NG

| 12 | REPLACE FRONT SEAT ASSEMBLY RH |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the front seat RH (see page SE-11).

NEXT

| 13 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

| 14 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NEXT

END

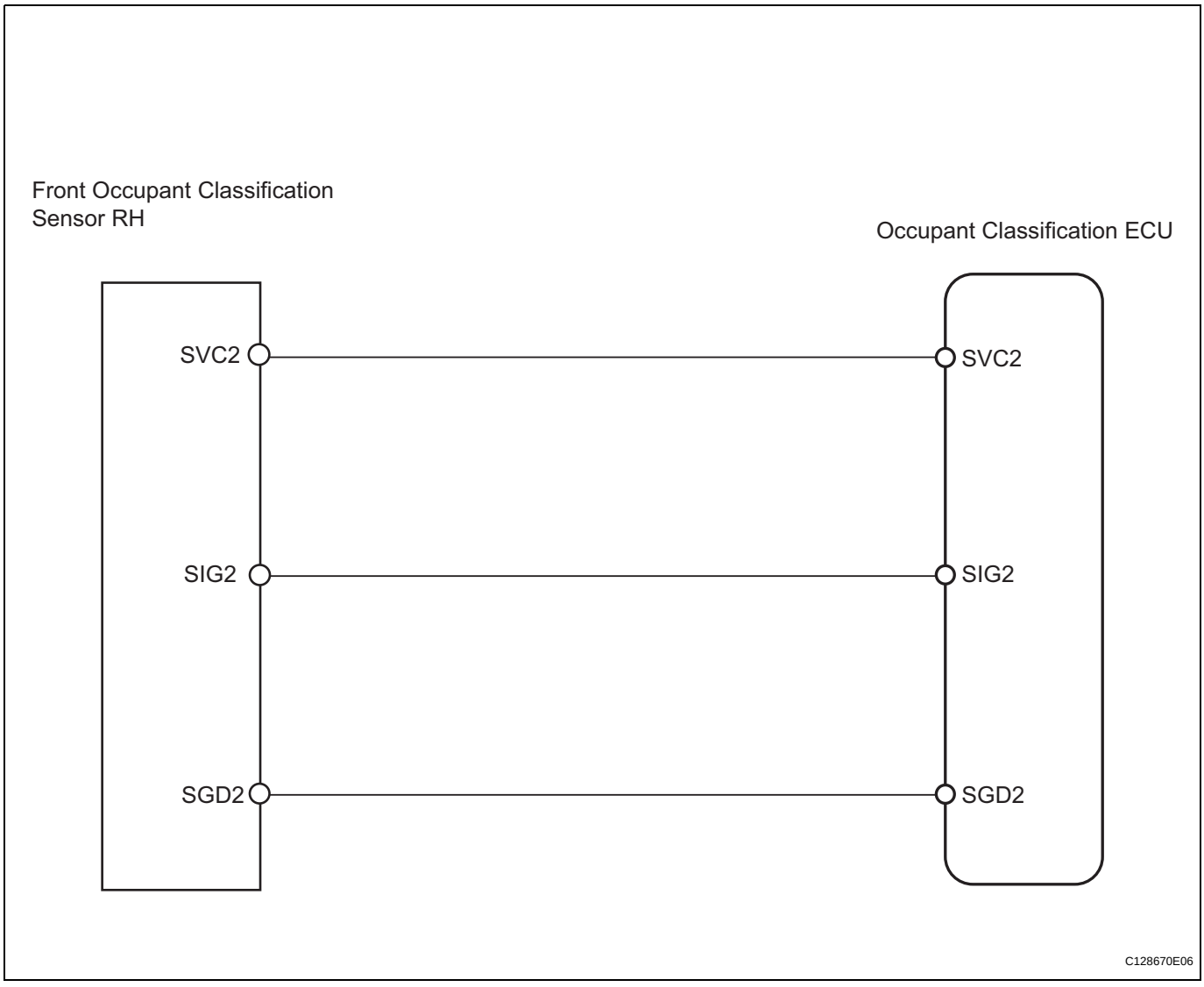
| DTC | B1781 | Front Occupant Classification Sensor RH Circuit Malfunction |
|---|---|---|

## DESCRIPTION

The front occupant classification sensor RH circuit consists of the occupant classification ECU and the front occupant classification sensor RH.
DTC B1781 is recorded when a malfunction is detected in the front occupant classification sensor RH circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1781 | When one of following conditions is met:<br>• Occupant classification ECU detects line short signal, open signal, short to ground signal or short to B+ signal in the front occupant classification sensor RH circuit for 2 seconds<br>• Front occupant classification sensor RH malfunction<br>• Occupant classification ECU malfunction | • Front seat wire RH<br>• Front seat RH (Front occupant classification sensor RH)<br>• Occupant classification ECU |

## WIRING DIAGRAM




RS

## INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see the undersurface of the seat cushion.
- In the above case, hold the seat so that it does not tip over. Holding the seat for a long period of time may cause a problem, such as seat rail deformation. Hold the seat up only for as long as necessary.

| 1 | CHECK FOR DTC |
|---|---|

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1781 is not output.**
HINT:
DTCs other than DTC B1781 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

| 2 | CHECK CONNECTION OF CONNECTOR |
|---|---|

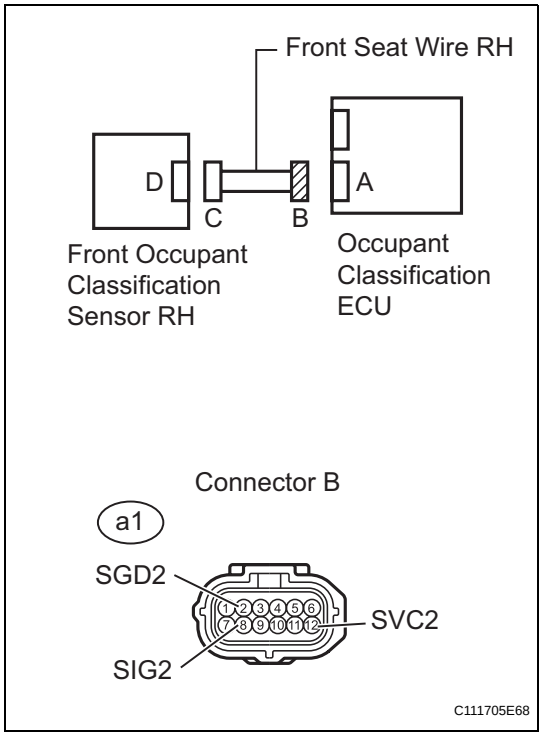
(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Check that the connectors are properly connected to the occupant classification ECU and the front occupant classification sensor RH.
**OK:**
**The connectors are properly connected.**

NG → **CONNECT CONNECTOR**

OK

RS

## 3 CHECK FRONT SEAT WIRE RH (TO B+)



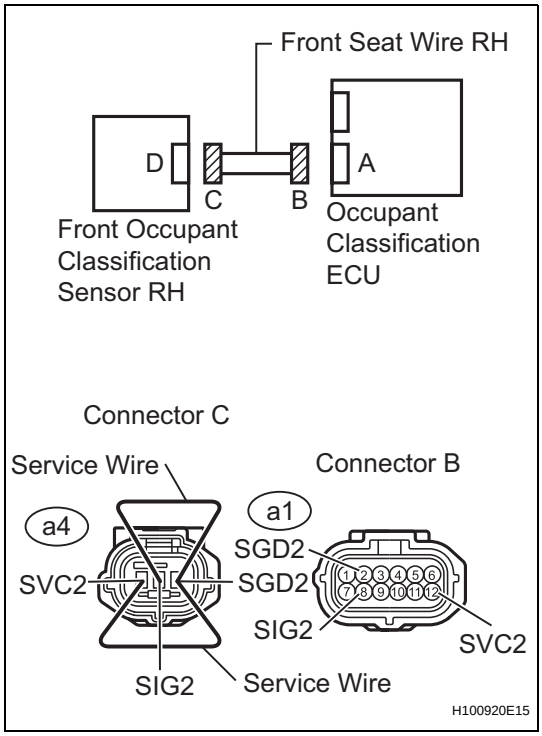

(a) Disconnect the connectors from the occupant classification ECU and the front occupant classification sensor RH.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Measure the voltage of the wire harness side connector.
**Standard voltage**

| Tester Connection | Specified Condition |
|---|---|
| a1-2 (SGD2) - Body ground | Below 1 V |
| a1-8 (SIG2) - Body ground | Below 1 V |
| a1-12 (SVC2) - Body ground | Below 1 V |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

## 4 CHECK FRONT SEAT WIRE RH (FOR OPEN)




(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Using a service wire, connect terminals a4-1 (SVC2) and a4-3 (SGD2), and connect terminals a4-2 (SIG2) and a4-3 (SGD2) of connector C.
**NOTICE:**
**Do not forcibly insert a service wire into the terminals of the connector when connecting them.**
(d) Measure the resistance of the wire harness side connector.
**Standard resistance**

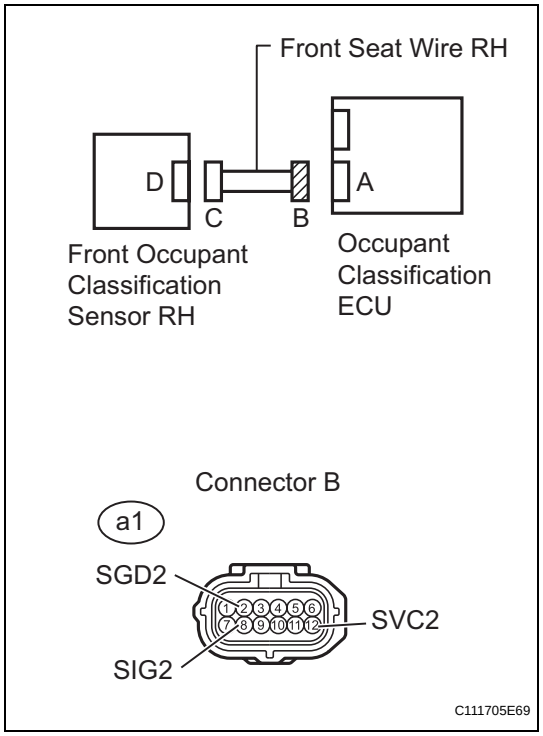
| Tester Connection | Specified Condition |
|---|---|
| a1-8 (SIG2) - a1-2 (SGD2) | Below 1 Ω |
| a1-12 (SVC2) - a1-2 (SGD2) | Below 1 Ω |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

RS

## 5 CHECK FRONT SEAT WIRE RH (FOR SHORT)




(a) Disconnect the service wire from connector C.
(b) Measure the resistance of the wire harness side connector.

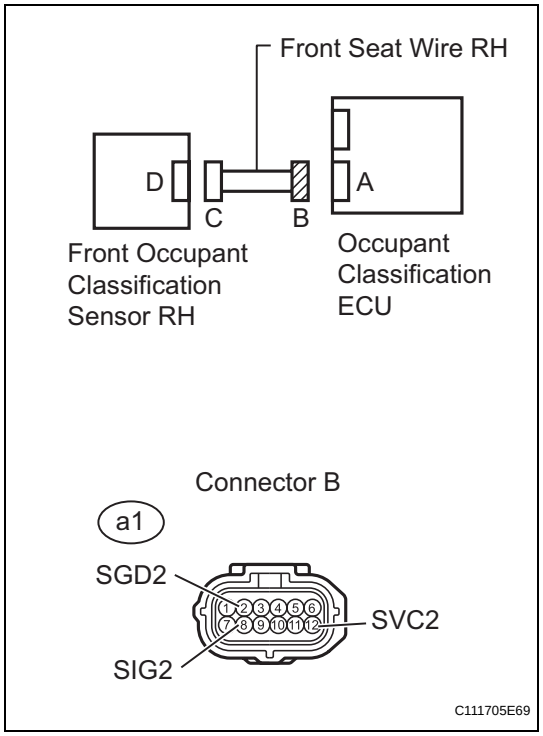
**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| a1-8 (SIG2) - a1-2 (SGD2) | 1 MΩ or higher |
| a1-12 (SVC2) - a1-2 (SGD2) | 1 MΩ or higher |
| a1-8 (SIG2) - a1-12 (SVC2) | 1 MΩ or higher |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

## 6 CHECK FRONT SEAT WIRE RH (TO GROUND)




(a) Measure the resistance of the wire harness side connector.

**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| a1-2 (SGD2) - Body ground | 1 MΩ or higher |
| a1-8 (SIG2) - Body ground | 1 MΩ or higher |
| a1-12 (SVC2) - Body ground | 1 MΩ or higher |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

RS

| 7 | CHECK FOR DTC |
|---|---|

(a) Connect the connectors to the occupant classification ECU and the front occupant classification sensor RH.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(e) Turn the ignition switch OFF.
(f) Turn the ignition switch ON.
(g) Check the DTCs (see page RS-249).
**OK:**
**DTC B1781 is not output.**
HINT:
DTCs other than DTC B1781 may be output at this time, but they are not related to this check.

**OK** → **USE SIMULATION METHOD TO CHECK**

**NG**

| 8 | REPLACE OCCUPANT CLASSIFICATION ECU |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-392).
HINT:
Perform the inspection using parts from a normal vehicle if possible.

**NEXT**

| 9 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

**NG** → **Go to step 12**

**OK**

RS

| 10 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NG → **Go to step 12**

OK

| 11 | CHECK FOR DTC |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Turn the ignition switch ON.
(c) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor assembly.
(d) Turn the ignition switch OFF.
(e) Turn the ignition switch ON.
(f) Check the DTCs (see page RS-249).
**OK:**
**DTC B1781 is not output.**
HINT:
DTCs other than DTC B1781 may be output at this time, but they are not related to this check.

OK → **END**

NG

| 12 | REPLACE FRONT SEAT ASSEMBLY RH |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the front seat RH (see page SE-8).

NEXT

| 13 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

| 14 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NEXT

END

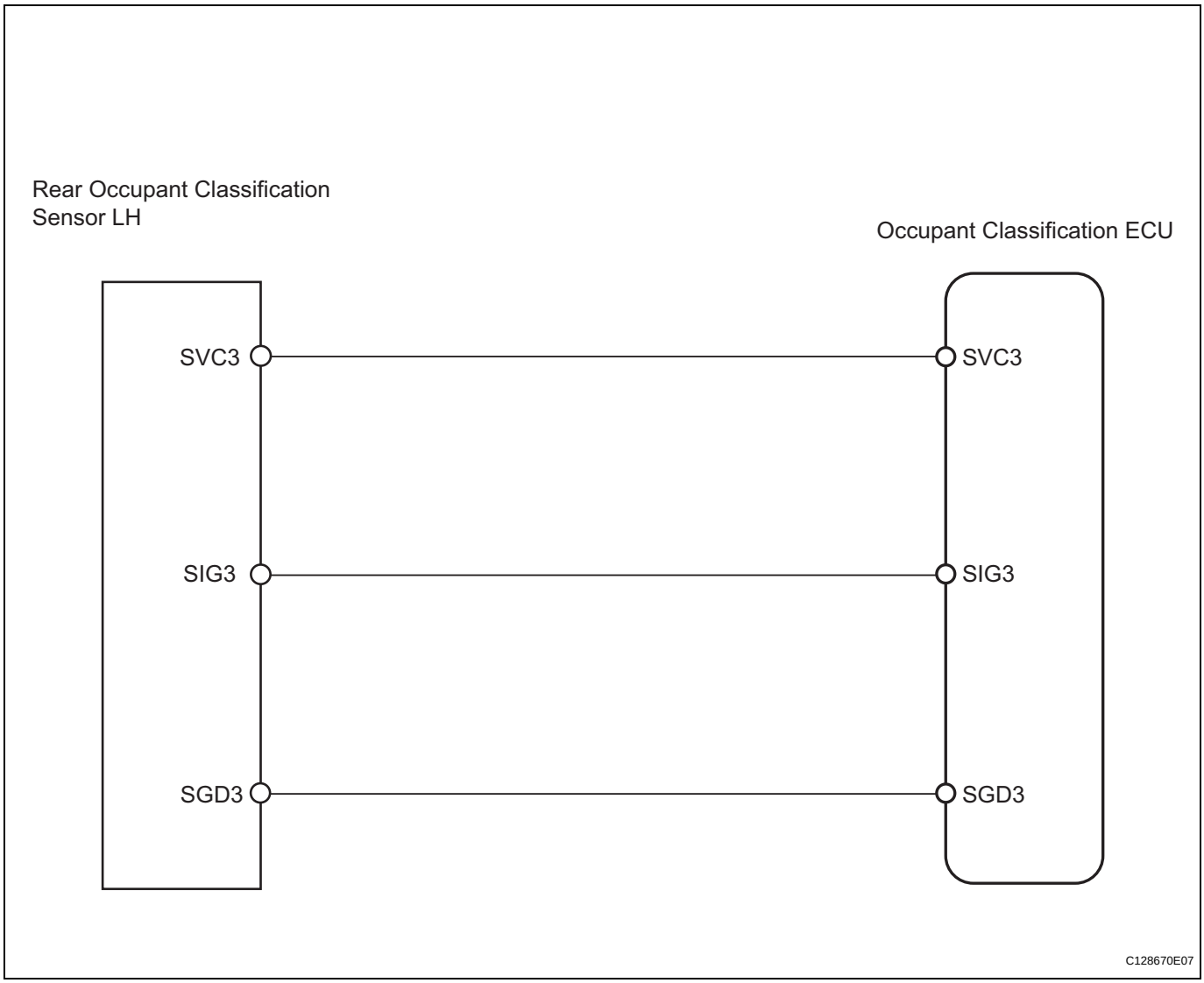
| DTC | B1782 | Rear Occupant Classification Sensor LH Circuit Malfunction |
|---|---|---|

## DESCRIPTION

The rear occupant classification sensor LH circuit consists of the occupant classification ECU and the rear occupant classification sensor LH.
DTC B1782 is recorded when a malfunction is detected in the rear occupant classification sensor LH circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1782 | When one of following conditions is met:<br>• Occupant classification ECU detects line short signal, open signal, short to ground signal or short to B+ signal in the rear occupant classification sensor LH circuit for 2 seconds<br>• Rear occupant classification sensor LH malfunction<br>• Occupant classification ECU malfunction | • Front seat wire RH<br>• Front seat RH (Rear occupant classification sensor LH)<br>• Occupant classification ECU |

## WIRING DIAGRAM




RS

## INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see the undersurface of the seat cushion.
- In the above case, hold the seat so that it does not tip over. Holding the seat for a long period of time may cause a problem, such as seat rail deformation. Hold the seat up only for as long as necessary.

| 1 | CHECK FOR DTC |
|---|---|

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1782 is not output.**
HINT:
DTCs other than DTC B1782 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

| 2 | CHECK CONNECTION OF CONNECTOR |
|---|---|

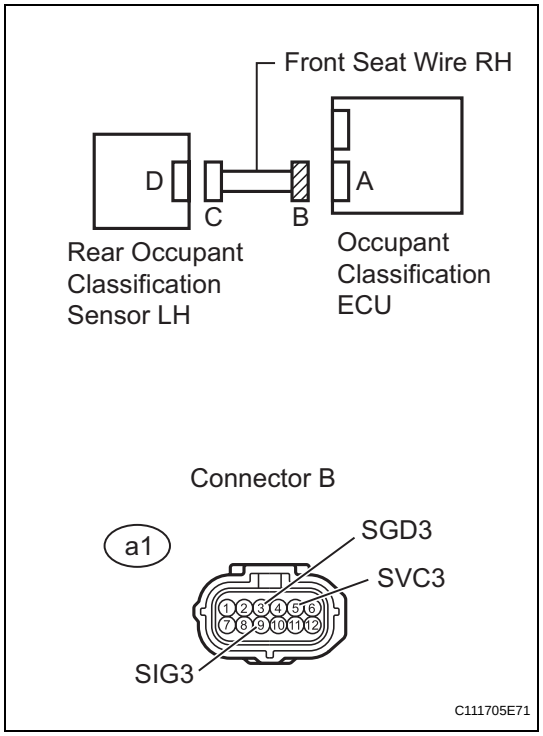
(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Check that the connectors are properly connected to the occupant classification ECU and the rear occupant classification sensor LH.
**OK:**
**The connectors are properly connected.**

NG → **CONNECT CONNECTOR**

OK

RS

## 3 CHECK FRONT SEAT WIRE RH (TO B+)




(a) Disconnect the connectors from the occupant classification ECU and the rear occupant classification sensor LH.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Measure the voltage of the wire harness side connector.

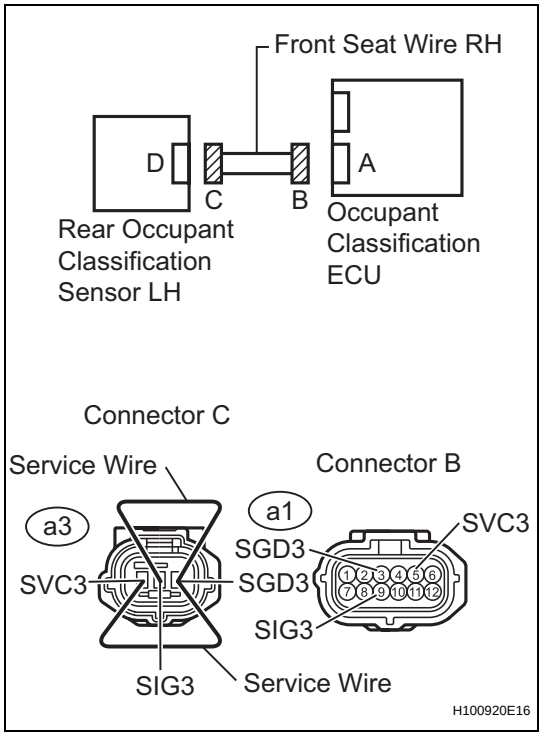
**Standard voltage**

| Tester Connection | Specified Condition |
|---|---|
| a1-3 (SGD3) - Body ground | Below 1 V |
| a1-5 (SVC3) - Body ground | Below 1 V |
| a1-9 (SIG3) - Body ground | Below 1 V |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

## 4 CHECK FRONT SEAT WIRE RH (FOR OPEN)




(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Using a service wire, connect terminals a3-1 (SVC3) and a3-3 (SGD3), and connect terminals a3-2 (SIG3) and a3-3 (SGD3) of connector C.

**NOTICE:**
**Do not forcibly insert a service wire into the terminals of the connector when connecting them.**

(d) Measure the resistance of the wire harness side connector.

**Standard resistance**

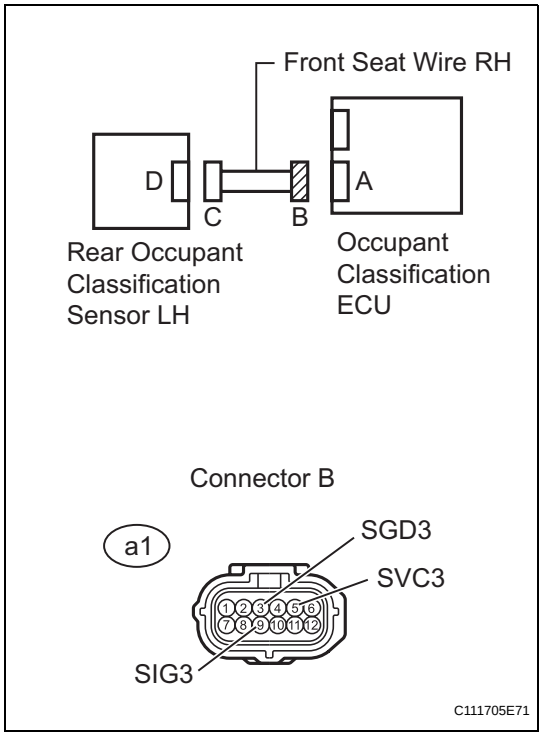
| Tester Connection | Specified Condition |
|---|---|
| a1-5 (SVC3) - a1-3 (SGD3) | Below 1 Ω |
| a1-9 (SIG3) - a1-3 (SGD3) | Below 1 Ω |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

RS

## 5 CHECK FRONT SEAT WIRE RH (FOR SHORT)




(a) Disconnect the service wire from connector C.
(b) Measure the resistance of the wire harness side connector.

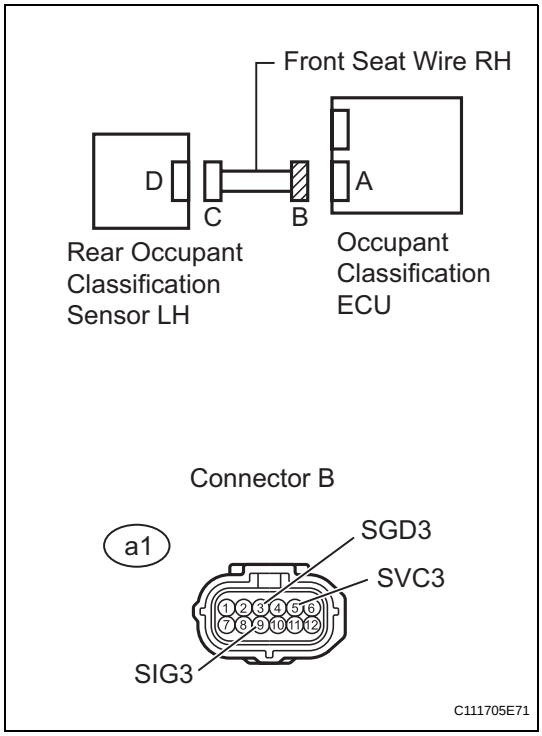
**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| a1-5 (SVC3) - a1-3 (SGD3) | 1 MΩ or higher |
| a1-9 (SIG3) - a1-3 (SGD3) | 1 MΩ or higher |
| a1-5 (SVC3) - a1-9 (SIG3) | 1 MΩ or higher |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

## 6 CHECK FRONT SEAT WIRE RH (TO GROUND)




(a) Measure the resistance of the wire harness side connector.

**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| a1-3 (SGD3) - Body ground | 1 MΩ or higher |
| a1-5 (SVC3) - Body ground | 1 MΩ or higher |
| a1-9 (SIG3) - Body ground | 1 MΩ or higher |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

RS

| 7 | CHECK FOR DTC |
|---|---|

(a) Connect the connectors to the occupant classification ECU and the rear occupant classification sensor LH.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(e) Turn the ignition switch OFF.
(f) Turn the ignition switch ON.
(g) Check the DTCs (see page RS-249).
**OK:**
**DTC B1782 is not output.**
HINT:
DTCs other than DTC B1782 may be output at this time, but they are not related to this check.

**OK** → **USE SIMULATION METHOD TO CHECK**

**NG**

| 8 | REPLACE OCCUPANT CLASSIFICATION ECU |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-392).
HINT:
Perform the inspection using parts from a normal vehicle if possible.

**NEXT**

| 9 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

**NG** → **Go to step 12**

**OK**

RS

| 10 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NG → **Go to step 12**

OK

| 11 | CHECK FOR DTC |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Turn the ignition switch ON.
(c) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(d) Turn the ignition switch OFF.
(e) Turn the ignition switch ON.
(f) Check the DTCs (see page RS-249).
**OK:**
**DTC B1782 is not output.**
HINT:
DTCs other than DTC B1782 may be output at this time, but they are not related to this check.

OK → **END**

RS

NG

| 12 | REPLACE FRONT SEAT ASSEMBLY RH |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the front seat assembly RH (see page SE-8).

NEXT

| 13 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

| 14 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NEXT

END

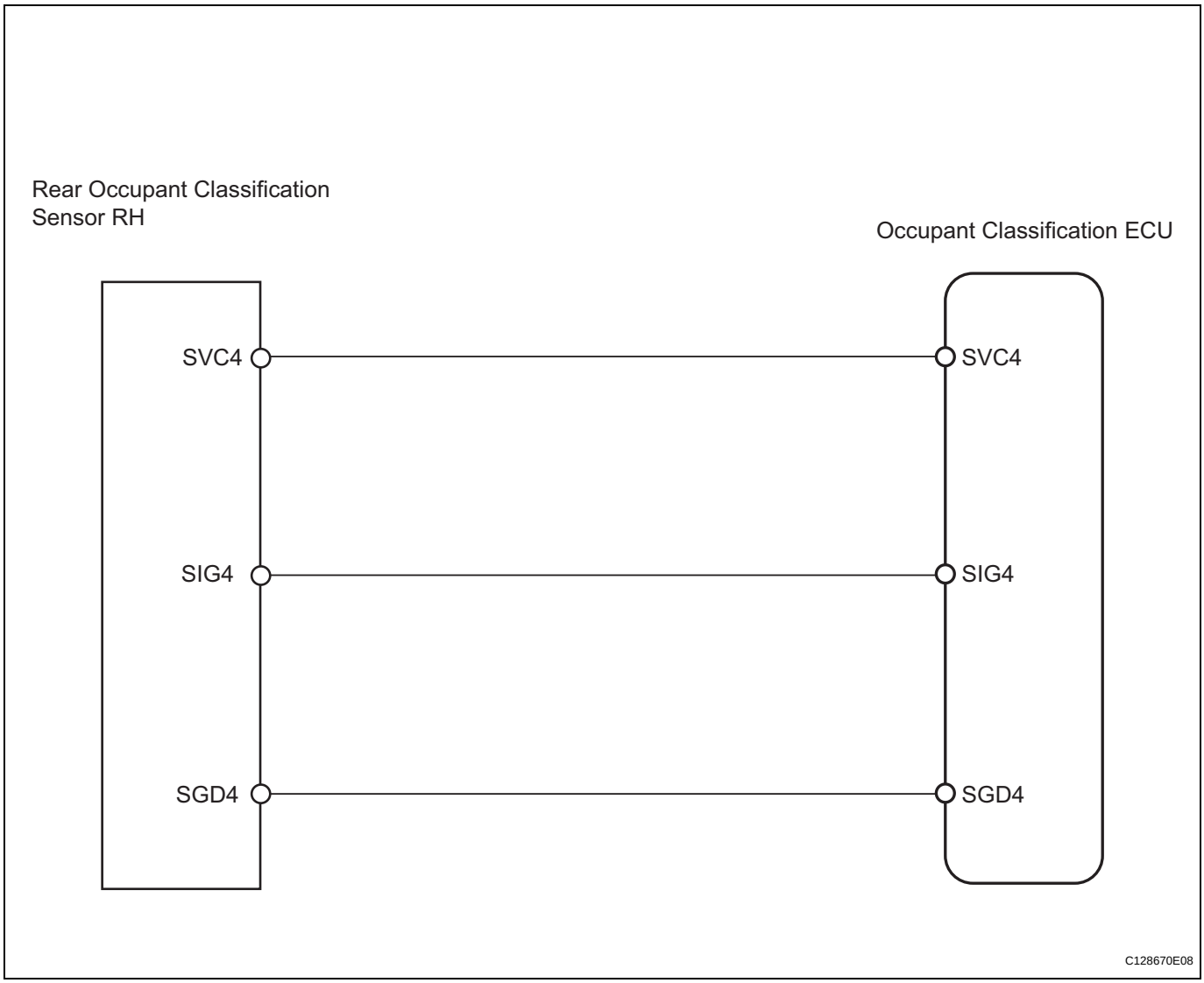
| DTC | B1783 | Rear Occupant Classification Sensor RH Circuit Malfunction |
|---|---|---|

## DESCRIPTION

The rear occupant classification sensor RH circuit consists of the occupant classification ECU and the rear occupant classification sensor RH.
DTC B1783 is recorded when a malfunction is detected in the rear occupant classification sensor RH circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1783 | When one of following conditions is met:<br>• Occupant classification ECU detects line short signal, open signal, short to ground signal or short to B+ signal in the rear occupant classification sensor RH circuit for 2 seconds<br>• Rear occupant classification sensor RH malfunction<br>• Occupant classification ECU malfunction | • Front seat wire RH<br>• Front seat RH (Rear occupant classification sensor RH)<br>• Occupant classification ECU |

## WIRING DIAGRAM




RS

## INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see the undersurface of the seat cushion.
- In the above case, hold the seat so that it does not tip over. Holding the seat for a long period of time may cause a problem, such as seat rail deformation. Hold the seat up only for as long as necessary.

| 1 | CHECK DTC |
|---|---|

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1783 is not output.**
HINT:
DTCs other than DTC B1783 may be output at this time, but they are not related to this check.

**OK** → **USE SIMULATION METHOD TO CHECK**

**NG**

| 2 | CHECK CONNECTION OF CONNECTOR |
|---|---|

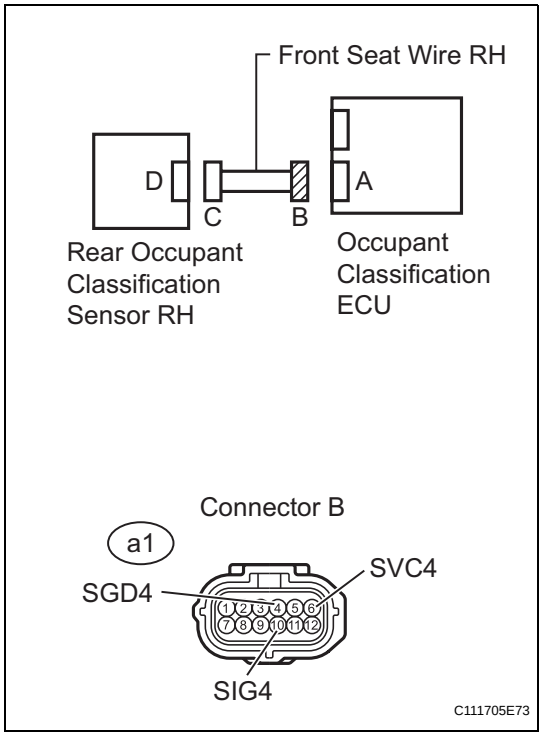
(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Check that the connectors are properly connected to the occupant classification ECU and the rear occupant classification sensor RH.
**OK:**
**The connectors are properly connected.**

**NG** → **CONNECT CONNECTOR**

**OK**

RS

## 3 CHECK FRONT SEAT WIRE RH (TO B+)




(a) Disconnect the connectors from the occupant classification ECU and the rear occupant classification sensor RH.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Measure the voltage of the wire harness side connector.

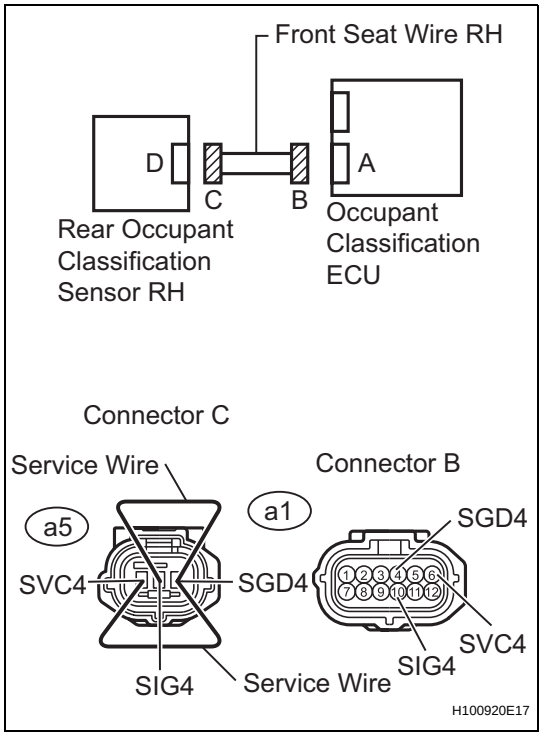
**Standard voltage**

| Tester Connection | Specified Condition |
|---|---|
| a1-4 (SGD4) - Body ground | Below 1 V |
| a1-6 (SVC4) - Body ground | Below 1 V |
| a1-10 (SIG4) - Body ground | Below 1 V |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

## 4 CHECK FRONT SEAT WIRE RH (FOR OPEN)




(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Using a service wire, connect terminals a5-1 (SVC4) and a5-3 (SGD4), and connect terminals a5-2 (SIG4) and a5-3 (SGD4) of connector C.

**NOTICE:**
**Do not forcibly insert a service wire into the terminals of the connector when connecting them.**

(d) Measure the resistance of the wire harness side connector.

**Standard resistance**

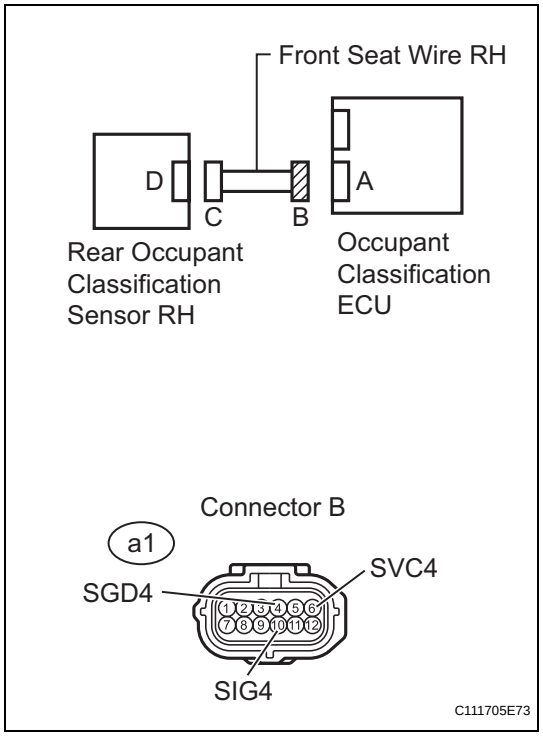
| Tester Connection | Specified Condition |
|---|---|
| a1-6 (SVC4) - a1-4 (SGD4) | Below 1 Ω |
| a1-10 (SIG4) - a1-4 (SGD4) | Below 1 Ω |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

RS

## 5 CHECK FRONT SEAT WIRE RH (FOR SHORT)




(a) Disconnect the service wire from connector C.
(b) Measure the resistance of the wire harness side connector.

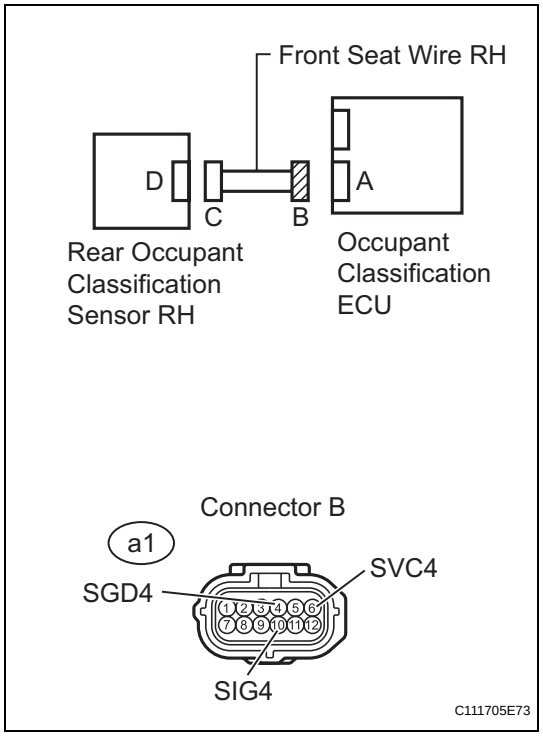
**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| a1-6 (SVC4) - a1-4 (SGD4) | 1 MΩ or higher |
| a1-10 (SIG4) - a1-4 (SGD4) | 1 MΩ or higher |
| a1-6 (SVC4) - a1-10 (SIG4) | 1 MΩ or higher |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

## 6 CHECK FRONT SEAT WIRE RH (TO GROUND)




(a) Measure the resistance of the wire harness side connector.

**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| a1-4 (SGD4) - Body ground | 1 MΩ or higher |
| a1-6 (SVC4) - Body ground | 1 MΩ or higher |
| a1-10 (SIG4) - Body ground | 1 MΩ or higher |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

RS

| 7 | CHECK FOR DTC |
|---|---|

(a) Connect the connectors to the occupant classification ECU and the rear occupant classification sensor RH.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(e) Turn the ignition switch OFF.
(f) Turn the ignition switch ON.
(g) Check the DTCs (see page RS-249).
**OK:**
**DTC B1783 is not output.**
HINT:
DTCs other than DTC B1783 may be output at this time, but they are not related to this check.

| OK | USE SIMULATION METHOD TO CHECK |
|---|---|

NG

| 8 | REPLACE OCCUPANT CLASSIFICATION ECU |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-392).
HINT:
Perform the inspection using parts from a normal vehicle if possible.

NEXT

| 9 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

| NG | Go to step 12 |
|---|---|

OK

RS

| 10 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NG → **Go to step 12**

OK

| 11 | CHECK FOR DTC |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Turn the ignition switch ON.
(c) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(d) Turn the ignition switch OFF.
(e) Turn the ignition switch ON.
(f) Check the DTCs (see page RS-249).
**OK:**
**DTC B1783 is not output.**
HINT:
DTCs other than DTC B1783 may be output at this time, but they are not related to this check.

OK → **END**

NG

| 12 | REPLACE FRONT SEAT ASSEMBLY RH |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the front seat RH (see page SE-8).

NEXT

| 13 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

| 14 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NEXT

END

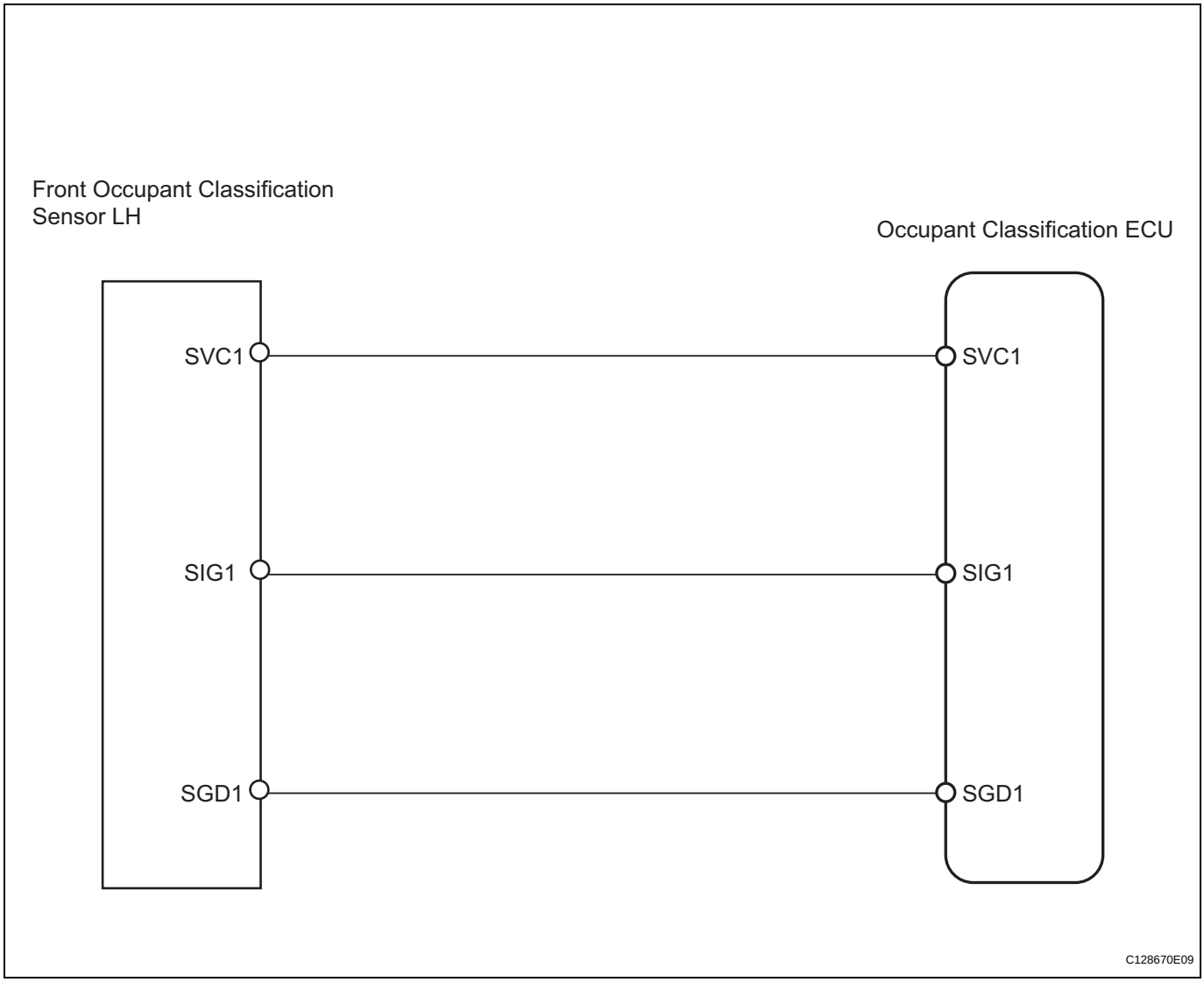
| DTC | B1785 | Front Occupant Classification Sensor LH Collision Detection |
|---|---|---|

## DESCRIPTION

DTC B1785 is output when the occupant classification ECU receives a collision detection signal sent by the front occupant classification sensor LH when an accident occurs.
DTC B1785 is also output when the front seat RH is subjected to a strong impact, even if an actual accident does not occur.
However, when the occupant classification ECU outputs a collision detection signal, even if the vehicle is not in a collision, DTC B1785 can be cleared by performing the zero point calibration and sensitivity check.
Therefore, when DTC B1785 is output, first perform the zero point calibration and sensitivity check.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1785 | When one of following conditions is met:<br>• Front seat RH malfunction<br>• Occupant classification ECU malfunction<br>• Front occupant classification sensor LH detects large load | • Occupant classification ECU<br>• Front seat RH (Front occupant classification sensor LH) |

## WIRING DIAGRAM




RS

## INSPECTION PROCEDURE

**1 PERFORM ZERO POINT CALIBRATION**

(a) Connect the intelligent tester (with CAN VIM) to the DLC3.
(b) Turn the ignition switch ON.
(c) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NG → **Go to step 4**

OK

**2 PERFORM SENSITIVITY CHECK**

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NG → **Go to step 4**

OK

**3 CHECK FOR DTC**

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1785 is not output.**
HINT:
DTCs other than DTC B1785 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

**4 REPLACE FRONT SEAT ASSEMBLY RH**

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

RS

(c) Replace the front seat RH (see page SE-8).
HINT:
Perform the inspection using parts from a normal vehicle if possible.

NEXT

| 5 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester (with CAN VIM) to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NG → **Go to step 8**

OK

| 6 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NG → **Go to step 8**

OK

RS

| 7 | CHECK FOR DTC |
|---|---|

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1785 is not output.**
HINT:
DTCs other than DTC B1785 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

| 8 | REPLACE OCCUPANT CLASSIFICATION ECU |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page SE-8).

NEXT

| 9 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

| 10 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

RS

NEXT

END

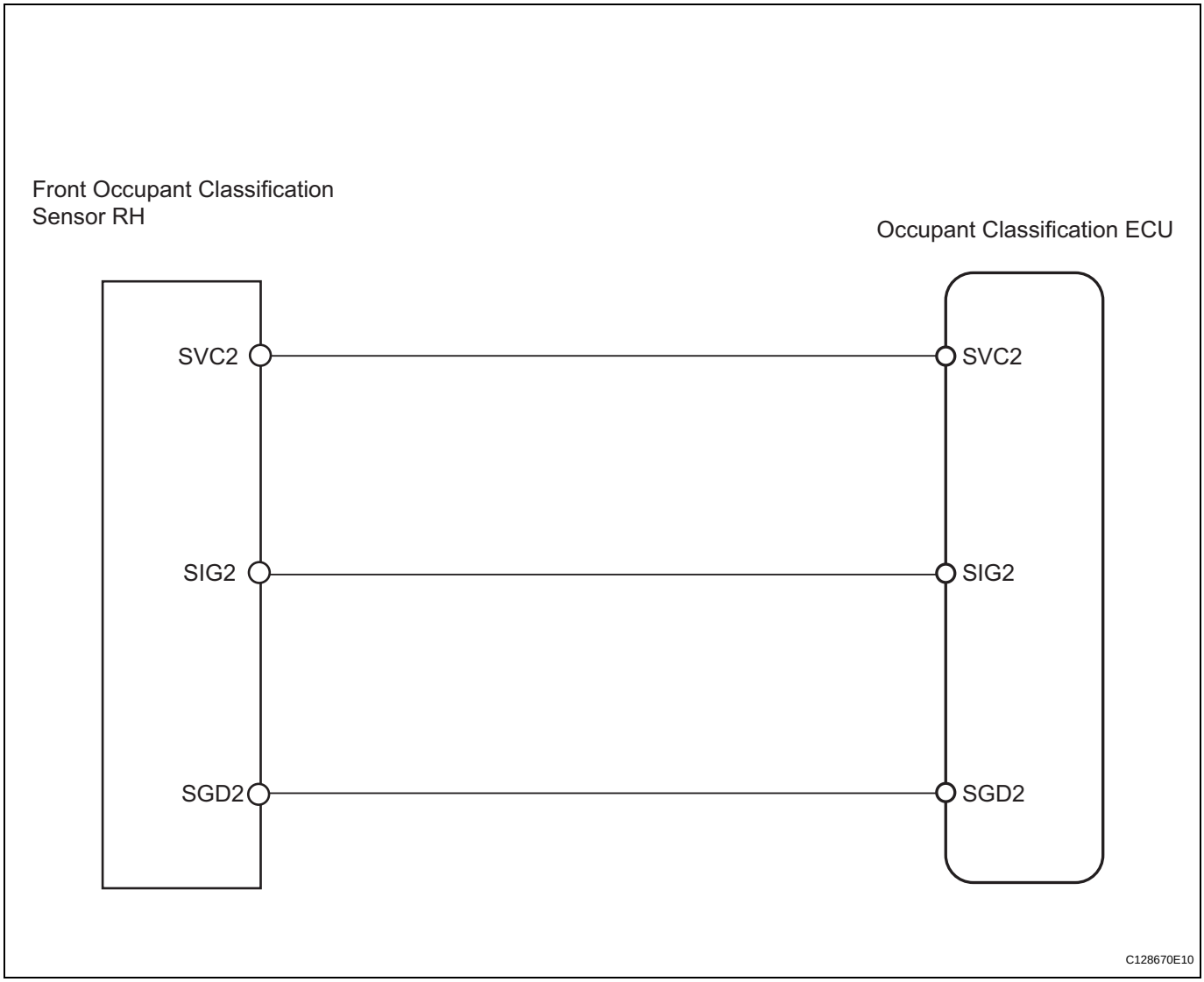
| DTC | B1786 | Front Occupant Classification Sensor RH Collision Detection |
|---|---|---|

## DESCRIPTION

DTC B1786 is output when the occupant classification ECU receives a collision detection signal sent by the front occupant classification sensor RH when an accident occurs.
DTC B1786 is also output when the front seat assembly RH is subjected to a strong impact, even if an actual accident does not occur.
However, when the occupant classification ECU outputs a collision detection signal, even if the vehicle is not in a collision, DTC B1786 can be cleared by performing the zero point calibration and sensitivity check.
Therefore, when DTC B1786 is output, first perform the zero point calibration and sensitivity check.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1786 | When one of following conditions is met:<br>• Front seat RH malfunction<br>• Occupant classification ECU malfunction<br>• Front occupant classification sensor RH detects large load | • Occupant classification ECU<br>• Front seat RH (Front occupant classification sensor RH) |

## WIRING DIAGRAM




RS

## INSPECTION PROCEDURE

**1 PERFORM ZERO POINT CALIBRATION**

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch ON.
(c) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NG → **Go to step 4**

OK ↓

**2 PERFORM SENSITIVITY CHECK**

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NG → **Go to step 4**

OK ↓

**3 CHECK FOR DTC**

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1786 is not output.**
HINT:
DTCs other than DTC B1786 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG ↓

**4 REPLACE FRONT SEAT ASSEMBLY RH**

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the front seat RH (see page SE-8).

HINT:
Perform the inspection using parts from a normal vehicle if possible.

NEXT

| 5 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NG → **Go to step 8**

OK

| 6 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NG → **Go to step 8**

OK

| 7 | CHECK FOR DTC |
|---|---|

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1786 is not output.**
HINT:
DTCs other than DTC B1786 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

RS

| 8 | REPLACE OCCUPANT CLASSIFICATION ECU |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-392).

NEXT

| 9 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

| 10 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

RS

NEXT

END

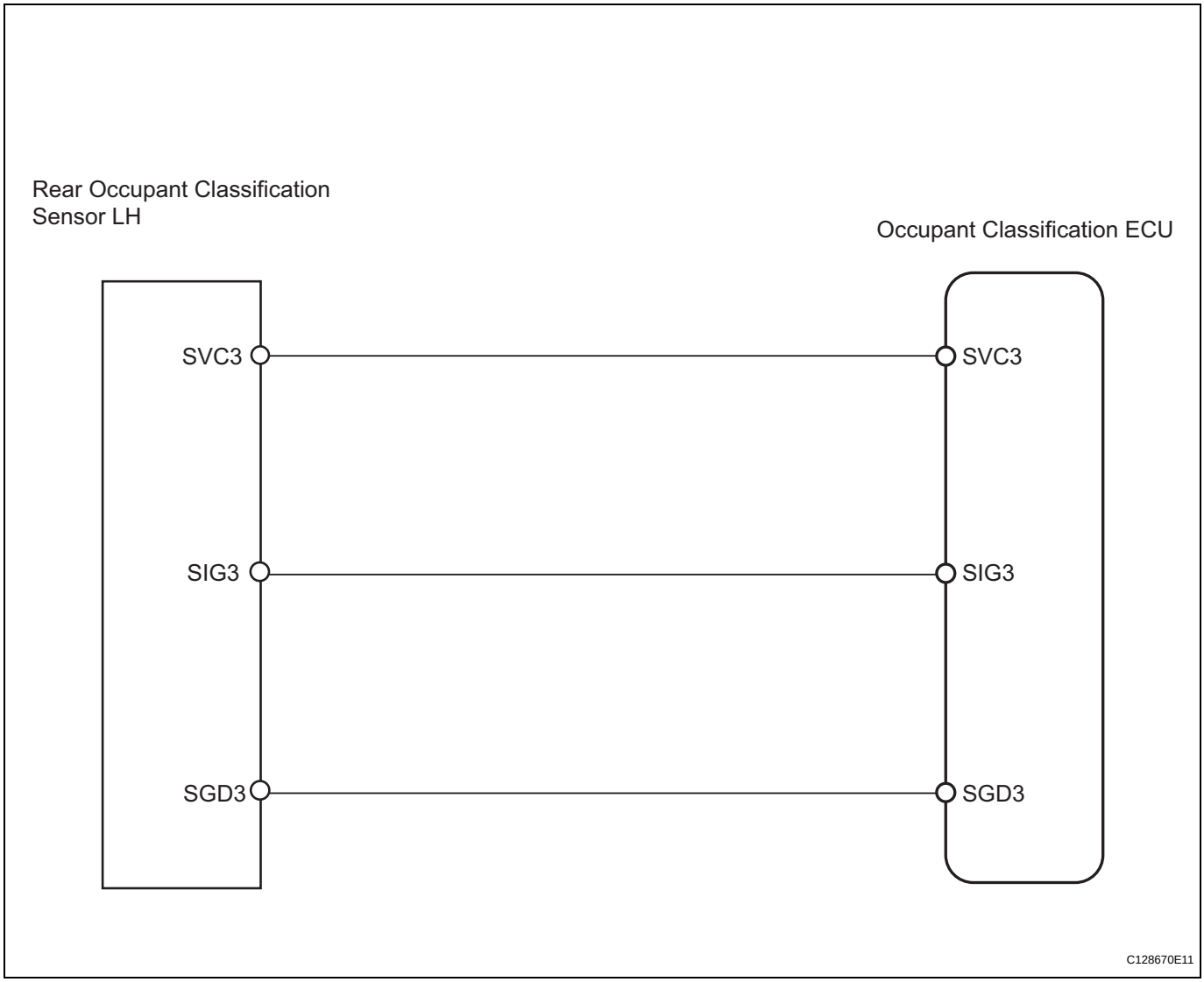
| DTC | B1787 | Rear Occupant Classification Sensor LH Collision Detection |
|---|---|---|

## DESCRIPTION

DTC B1787 is output when the occupant classification ECU receives a collision detection signal sent by the rear occupant classification sensor LH when an accident occurs.
DTC B1787 is also output when the front seat assembly RH is subjected to a strong impact, even if an actual accident does not occur.
However, when the occupant classification ECU outputs a collision detection signal, even if the vehicle is not in a collision, DTC B1787 can be cleared by performing the zero point calibration and sensitivity check.
Therefore, when DTC B1787 is output, first perform the zero point calibration and sensitivity check.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1787 | When one of following conditions is met:<br>• Front seat RH malfunction<br>• Occupant classification ECU malfunction<br>• Rear occupant classification sensor LH detects large load | • Occupant classification ECU<br>• Front seat RH (Rear occupant classification sensor LH) |

## WIRING DIAGRAM




RS

## INSPECTION PROCEDURE

**1 PERFORM ZERO POINT CALIBRATION**

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch ON.
(c) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NG → **Go to step 4**

OK

**2 PERFORM SENSITIVITY CHECK**

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NG → **Go to step 4**

OK

**3 CHECK FOR DTC**

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1787 is not output.**
HINT:
DTCs other than DTC B1787 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

**4 REPLACE FRONT SEAT ASSEMBLY RH**

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the front seat RH (see page SE-27).

HINT:
Perform the inspection using parts from a normal vehicle if possible.

NEXT

| 5 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NG → **Go to step 8**

OK

| 6 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NG → **Go to step 8**

OK

| 7 | CHECK FOR DTC |
|---|---|

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1787 is not output.**
HINT:
DTCs other than DTC B1787 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

RS

| 8 | REPLACE OCCUPANT CLASSIFICATION ECU |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-250).

NEXT

| 9 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

| 10 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

RS

NEXT

END

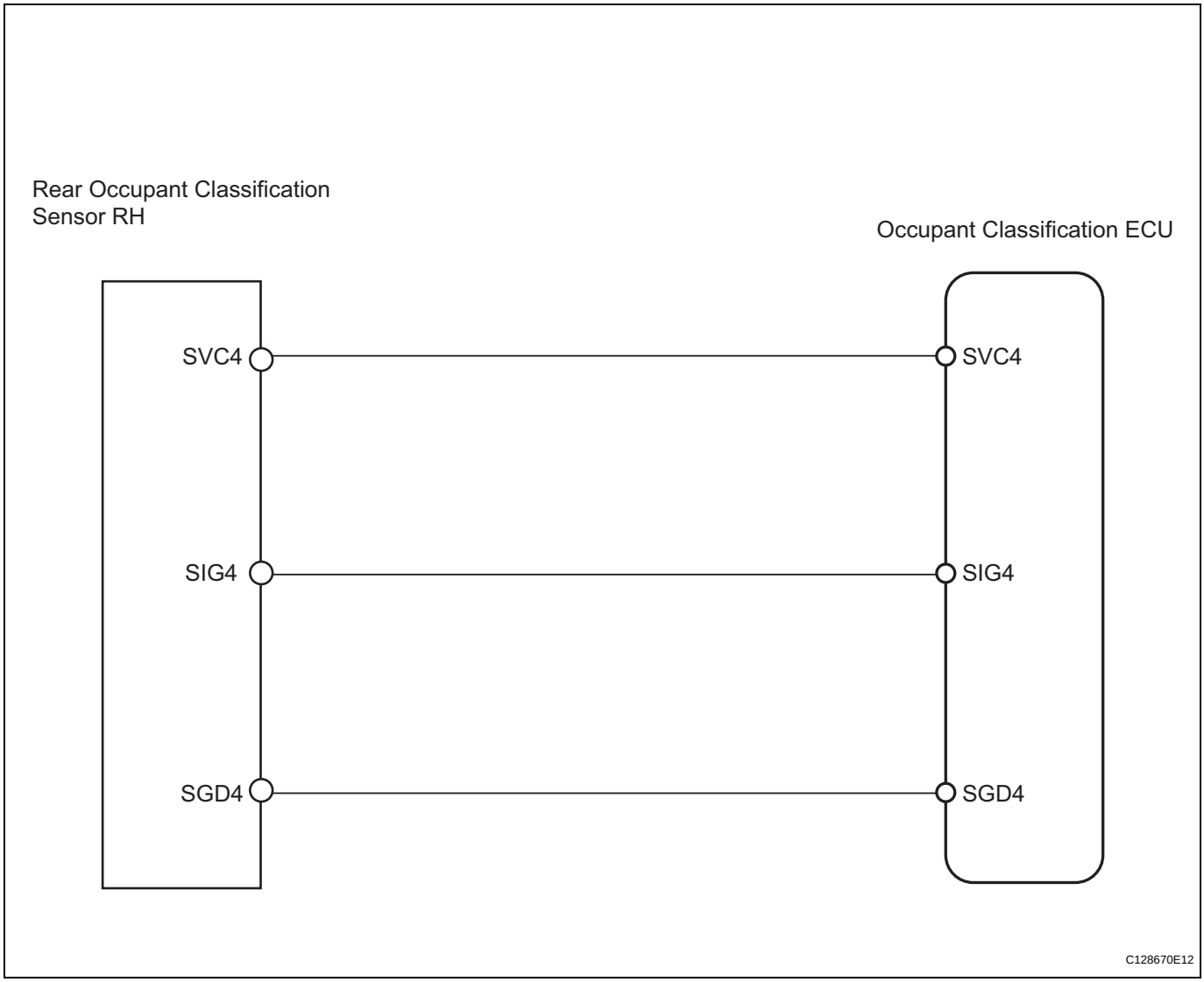
| DTC | B1788 | Rear Occupant Classification Sensor RH Collision Detection |
|---|---|---|

## DESCRIPTION

DTC B1788 is output when the occupant classification ECU receives a collision detection signal sent by the rear occupant classification sensor RH when an accident occurs.
DTC B1788 is also output when the front seat RH is subjected to a strong impact, even if an actual accident does not occur.
However, when the occupant classification ECU outputs a collision detection signal, even if the vehicle is not in a collision, DTC B1788 can be cleared by performing the zero point calibration and sensitivity check.
Therefore, when DTC B1788 is output, first perform the zero point calibration and sensitivity check.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1788 | When one of following conditions is met:<br>• Front seat RH malfunction<br>• Occupant classification ECU malfunction<br>• Rear occupant classification sensor RH detects large load | • Occupant classification ECU<br>• Front seat RH (Rear occupant classification sensor RH) |

## WIRING DIAGRAM




RS

## INSPECTION PROCEDURE

**1 PERFORM ZERO POINT CALIBRATION**

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch ON.
(c) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

**NG** → **Go to step 4**

**OK**

**2 PERFORM SENSITIVITY CHECK**

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

**NG** → **Go to step 4**

**OK**

**3 CHECK FOR DTC**

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1788 is not output.**
HINT:
DTCs other than DTC B1788 may be output at this time, but they are not related to this check.

**OK** → **USE SIMULATION METHOD TO CHECK**

**NG**

**4 REPLACE FRONT SEAT ASSEMBLY RH**

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the front seat RH (see page SE-8).

HINT:
Perform the inspection using parts from a normal vehicle if possible.

NEXT

| 5 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NG → **Go to step 8**

OK

| 6 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NG → **Go to step 8**

OK

| 7 | CHECK FOR DTC |
|---|---|

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1788 is not output.**
HINT:
DTCs other than DTC B1788 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

RS

| 8 | REPLACE OCCUPANT CLASSIFICATION ECU |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-392).

NEXT

| 9 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

| 10 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

RS

NEXT

END

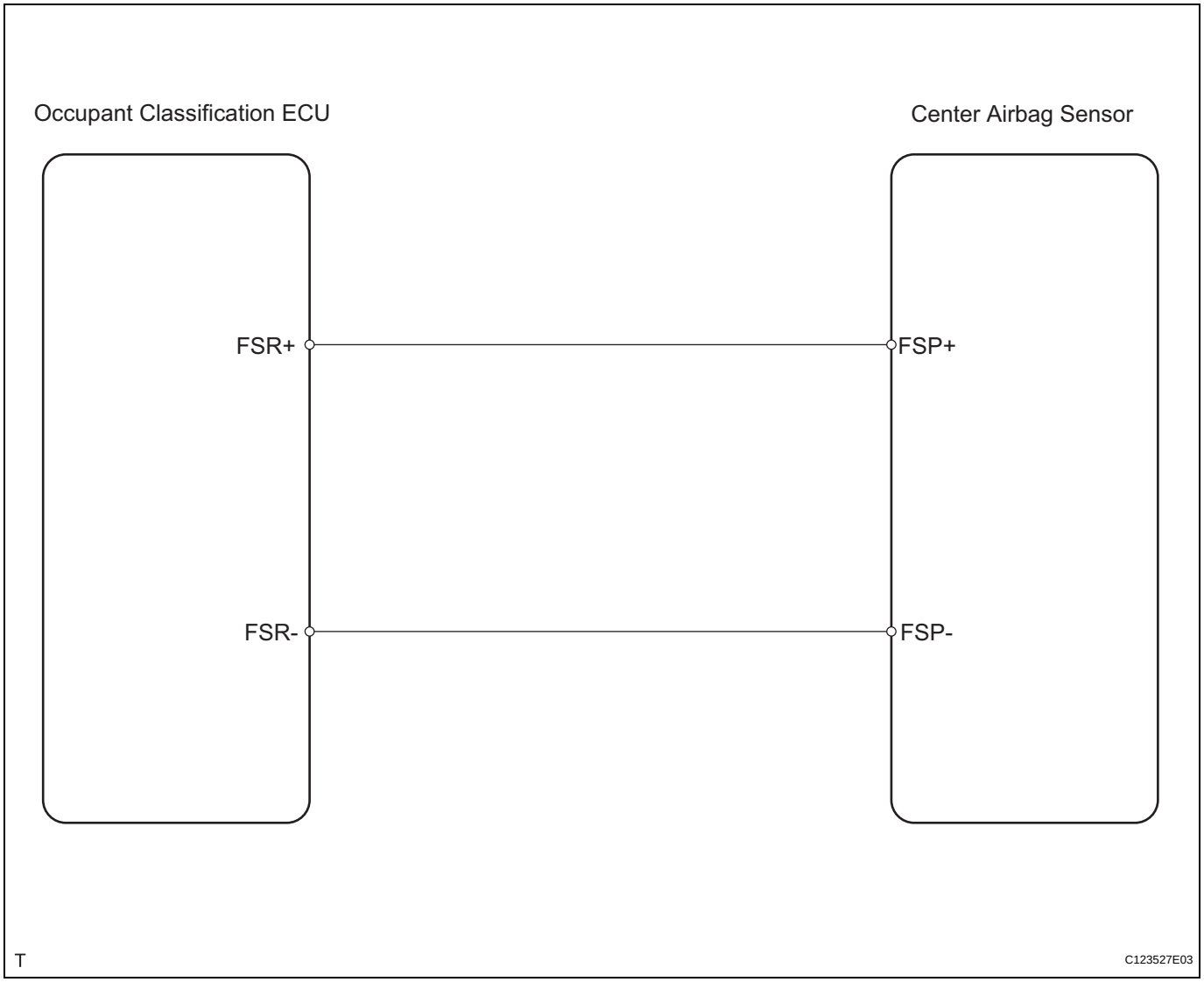
| DTC | B1790 | Center Airbag Sensor Assembly Communication Circuit Malfunction |
|---|---|---|

## DESCRIPTION

The center airbag sensor communication circuit consists of the occupant classification ECU and the center airbag sensor.
DTC B1790 is recorded when a malfunction is detected in the center airbag sensor communication circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1790 | When one of following conditions is met:<br>• Occupant classification ECU detects line short circuit signal, open circuit signal, short circuit to ground signal or short circuit to B+ signal in the center airbag sensor assembly communication circuit for 2 seconds<br>• Center airbag sensor malfunction<br>• Occupant classification ECU malfunction | • Floor wire<br>• Occupant classification ECU<br>• Center airbag sensor |

## WIRING DIAGRAM




RS

## INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see the undersurface of the seat cushion.
- In the above case, hold the seat so that it does not tip over. Holding the seat for a long period of time may cause a problem, such as seat rail deformation. Hold the seat up only for as long as necessary.

| 1 | CHECK FOR DTC |
|---|---|

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1790 is not output.**
HINT:
DTCs other than DTC B1790 may be output at this time, but they are not related to this check.

**OK** → **USE SIMULATION METHOD TO CHECK**

**NG**

| 2 | CHECK CONNECTION OF CONNECTOR |
|---|---|

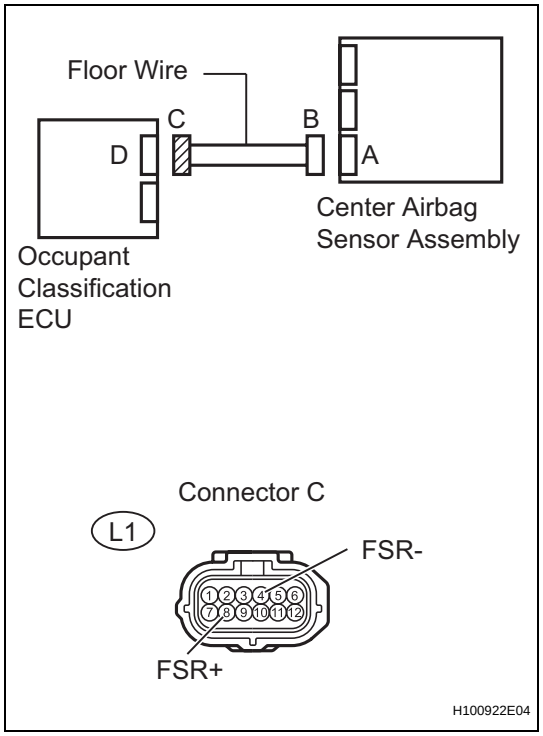
(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Check that the connectors are properly connected to the occupant classification ECU and the center airbag sensor.
**OK:**
**The connectors are properly connected.**

**NG** → **CONNECT CONNECTOR**

**OK**

RS

| 3 | CHECK FLOOR WIRE (TO B+) |
|---|---|




(a) Disconnect the connectors from the occupant classification ECU and the center airbag sensor.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Measure the voltage of the wire harness side connector.

**Standard voltage**

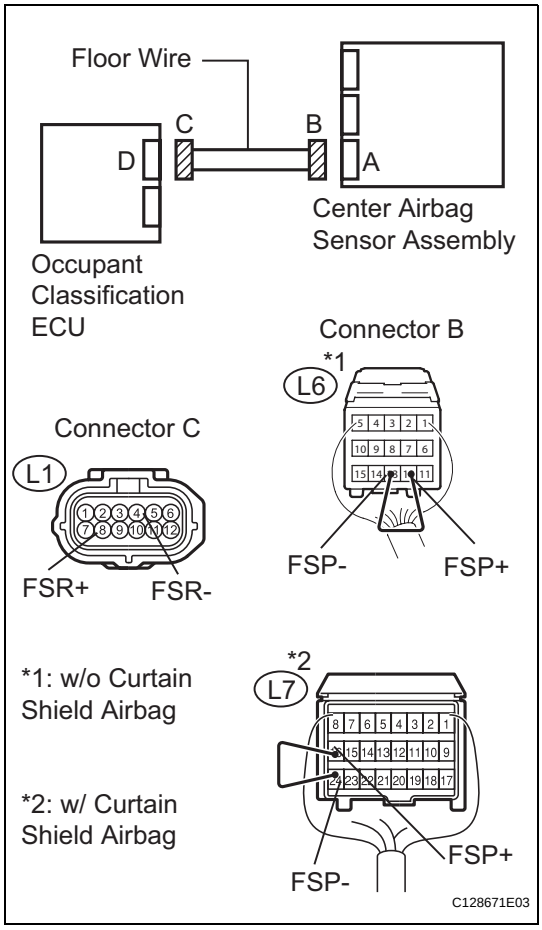
| Tester Connection | Specified Condition |
|---|---|
| L1-8 (FSR+) - Body ground | Below 1 V |
| L1-4 (FSR-) - Body ground | Below 1 V |

NG → **REPAIR OR REPLACE FLOOR WIRE**

OK

RS

| 4 | CHECK FLOOR WIRE (FOR OPEN) |
|---|---|




(a) Turn the ignition switch OFF.

(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

(c) Using a service wire, connect terminals L6-12 (FSP+) *1 and L6-13 (FSP-) *1 or L7-16 (FSP+) *2 and L7-24 (FSP-) *2 of connector B.

**NOTICE:**

**Do not forcibly insert a service wire into the terminals of the connector when connecting them.**

(d) Measure the resistance of the wire harness side connector.

**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| L1-8 (FSR+) - L1-4 (FSR-) | Below 1 Ω |

HINT:

*1: w/o Curtain shield airbag

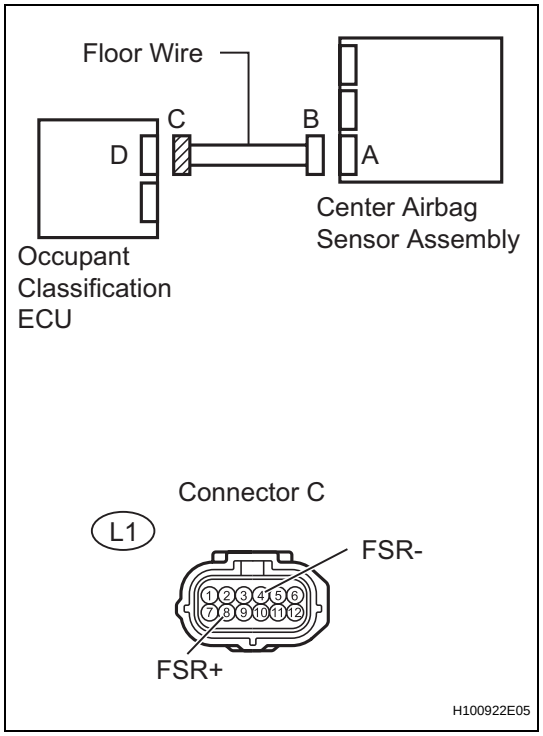
*2: w/ Curtain shield airbag

NG → **REPAIR OR REPLACE FLOOR WIRE**

OK

RS

## 5 CHECK FLOOR WIRE (FOR SHORT)




(a) Disconnect the service wire from connector B.
(b) Measure the resistance of the wire harness side connector.

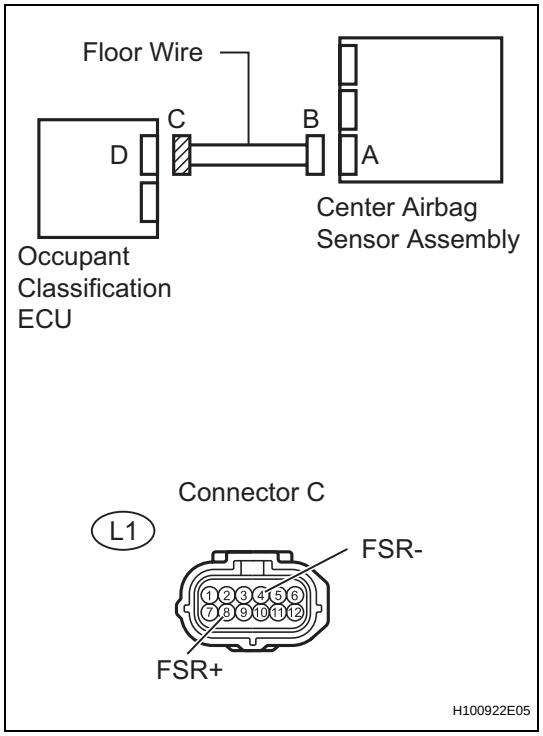
**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| L1-8 (FSR+) - L1-4 (FSR-) | 1 MΩ or higher |

NG → **REPAIR OR REPLACE FLOOR WIRE**

OK

## 6 CHECK FLOOR WIRE (TO GROUND)




(a) Measure the resistance of the wire harness side connector.

**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| L1-8 (FSR+) - Body ground | 1 MΩ or higher |
| L1-4 (FSR-) - Body ground | 1 MΩ or higher |

NG → **REPAIR OR REPLACE FLOOR WIRE**

OK

RS

| 7 | CHECK FOR DTC |
|---|---|

(a) Connect the connectors to the occupant classification ECU and the center airbag sensor.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(e) Turn the ignition switch OFF.
(f) Turn the ignition switch ON.
(g) Check the DTCs (see page RS-249).
**OK:**
**DTC B1790 is not output.**
HINT:
DTCs other than DTC B1790 may be output at this time, but they are not related to this check.

| OK | USE SIMULATION METHOD TO CHECK |
|---|---|

NG

| 8 | REPLACE OCCUPANT CLASSIFICATION ECU |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-392).
HINT:
Perform the inspection using parts from a normal vehicle if possible.

NEXT

| 9 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester (with CAN VIM) to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

RS

| 10 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NEXT

| 11 | CHECK FOR DTC |
|---|---|

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1790 is not output.**
HINT:
DTCs other than DTC B1790 may be output at this time, but they are not related to this check.

NG → **REPLACE CENTER AIRBAG SENSOR ASSEMBLY**

OK

**END**

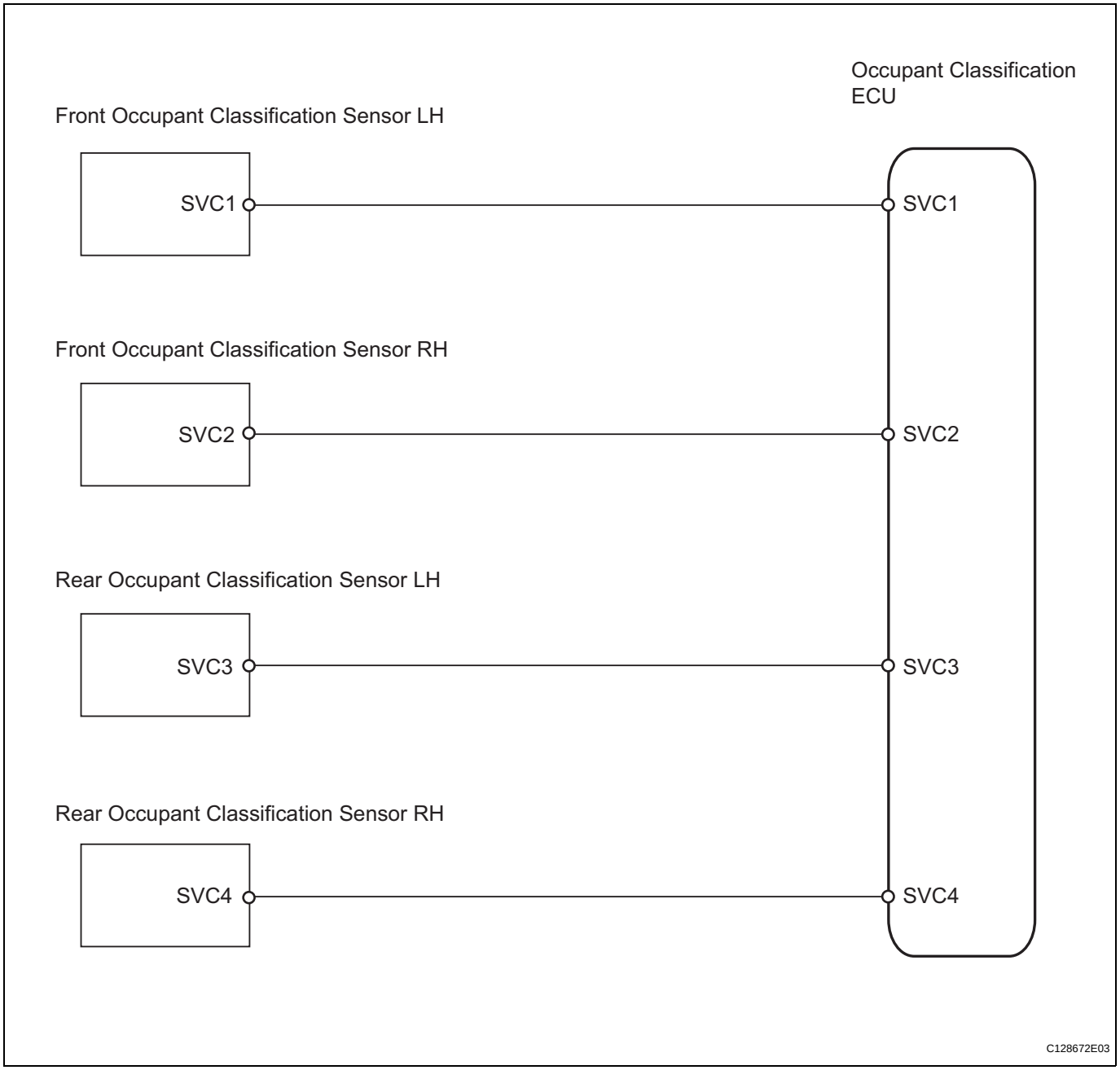
| DTC | B1793 | Occupant Classification Sensor Power Supply Circuit Malfunction |
|---|---|---|

## DESCRIPTION

The occupant classification sensor power supply circuit consists of the occupant classification ECU and the occupant classification sensors.
DTC B1793 is recorded when a malfunction is detected in the occupant classification sensor power supply circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1793 | When one of following conditions is met:<br>• Occupant classification ECU detects line short circuit signal, open circuit signal, short circuit to ground signal or short circuit to B+ signal in the occupant classification sensor power supply circuit for 2 seconds<br>• Occupant classification ECU malfunction | • Front seat wire RH<br>• Front seat RH (Occupant classification sensors)<br>• Occupant classification ECU |

## WIRING DIAGRAM




## INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front passenger seat installation bolts to see the undersurface of the seat cushion.
- In the above case, hold the seat so that it does not tip over. Holding the seat for a long period of time may cause a problem, such as seat rail deformation. Hold the seat up only for as long as necessary.

| | |
|---|---|
| 1 | **CHECK FOR DTC** |

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).

RS

HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.

(c) Turn the ignition switch OFF.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1793 is not output.**
HINT:
DTCs other than DTC B1793 may be output at this time, but they are not related to this check.

| | |
|---|---|
| OK | **USE SIMULATION METHOD TO CHECK** |

NG

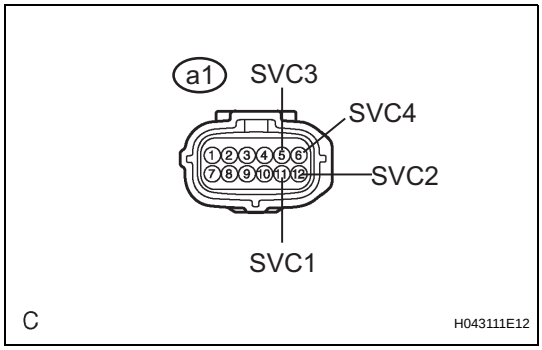
## 2 CHECK CONNECTION OF CONNECTOR

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Check that the connectors are properly connected to the occupant classification ECU and the occupant classification sensors.
**OK:**
**The connectors are properly connected.**

| | |
|---|---|
| NG | **CONNECT CONNECTOR** |

OK

## 3 CHECK FRONT SEAT WIRE RH (TO B+)



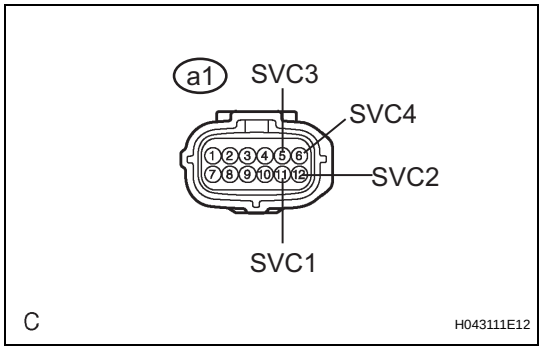

(a) Disconnect the connectors from the occupant classification ECU and the 4 occupant classification sensors.
(b) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Measure the voltage of the wire harness side connector.
**Standard voltage**

| Tester Connection | Specified Condition |
|---|---|
| a1-11 (SVC1) - Body ground | Below 1 V |
| a1-12 (SVC2) - Body ground | Below 1 V |
| a1-5 (SVC3) - Body ground | Below 1 V |
| a1-6 (SVC4) - Body ground | Below 1 V |

| | |
|---|---|
| NG | **REPAIR OR REPLACE FRONT SEAT WIRE RH** |

OK

| 4 | CHECK FRONT SEAT WIRE RH (TO GROUND) |
|---|---|




(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Measure the resistance of the wire harness side connector.

**Standard resistance**

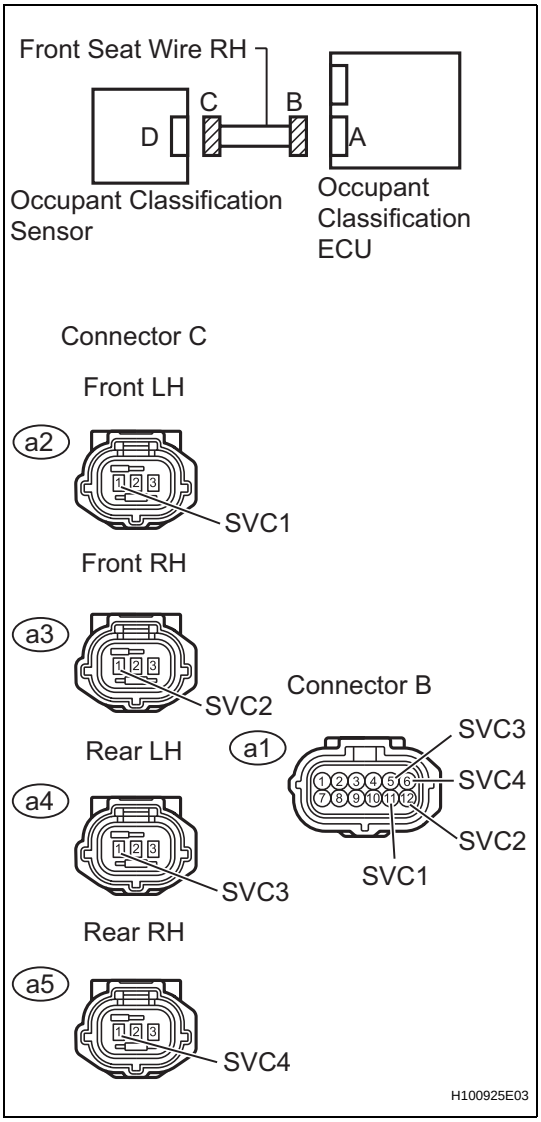
| Tester Connection | Specified Condition |
|---|---|
| a1-11 (SVC1) - Body ground | 1 MΩ or higher |
| a1-12 (SVC2) - Body ground | 1 MΩ or higher |
| a1-5 (SVC3) - Body ground | 1 MΩ or higher |
| a1-6 (SVC4) - Body ground | 1 MΩ or higher |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

RS

## 5 CHECK FRONT SEAT WIRE RH (FOR OPEN)




(a) Measure the resistance of the wire harness side connectors.

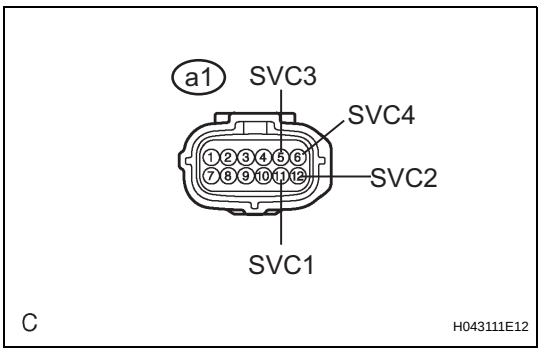
**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| a1-11 (SVC1) - a2-1 (SVC1) | Below 1 Ω |
| a1-12 (SVC2) - a3-1 (SVC2) | Below 1 Ω |
| a1-5 (SVC3) - a4-1 (SVC3) | Below 1 Ω |
| a1-6 (SVC4) - a5-1 (SVC4) | Below 1 Ω |

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

## 6 CHECK FRONT SEAT WIRE RH (FOR SHORT)




(a) Measure the resistance of the wire harness side connector.

**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| a1-5 (SVC3) - a1-6 (SVC4) | 1 MΩ or higher |
| a1-6 (SVC4) - a1-11 (SVC1) | 1 MΩ or higher |
| a1-11 (SVC1) - a1-12 (SVC2) | 1 MΩ or higher |
| a1-12 (SVC2) - a1-5 (SVC3) | 1 MΩ or higher |
| a1-12 (SVC2) - a1-6 (SVC4) | 1 MΩ or higher |
| a1-11 (SVC1) - a1-5 (SVC3) | 1 MΩ or higher |

RS

NG → **REPAIR OR REPLACE FRONT SEAT WIRE RH**

OK

| 7 | CHECK FOR DTC |
|---|---|

(a) Connect the connectors to the occupant classification ECU and the 4 occupant classification sensors.
(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(c) Turn the ignition switch ON.
(d) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(e) Turn the ignition switch OFF.
(f) Turn the ignition switch ON.
(g) Check the DTCs (see page RS-249).
**OK:**
**DTC B1793 is not output.**
HINT:
DTCs other than DTC B1793 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

| 8 | REPLACE OCCUPANT CLASSIFICATION ECU |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-392).
HINT:
Perform the inspection using parts from a normal vehicle if possible.

NEXT

| 9 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NG → Go to step 12

OK

| 10 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NG → Go to step 12

OK

| 11 | CHECK FOR DTC |
|---|---|

(a) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
(b) Turn the ignition switch ON.
(c) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(d) Turn the ignition switch OFF.
(e) Turn the ignition switch ON.
(f) Check the DTCs (see page RS-249).
**OK:**
**DTC B1793 is not output.**
HINT:
DTCs other than DTC B1793 may be output at this time, but they are related to this check.

OK → END

NG

| 12 | REPLACE FRONT SEAT ASSEMBLY RH |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the front seat RH (see page SE-8).

NEXT

| 13 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.

RS

(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

| 14 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NEXT

END

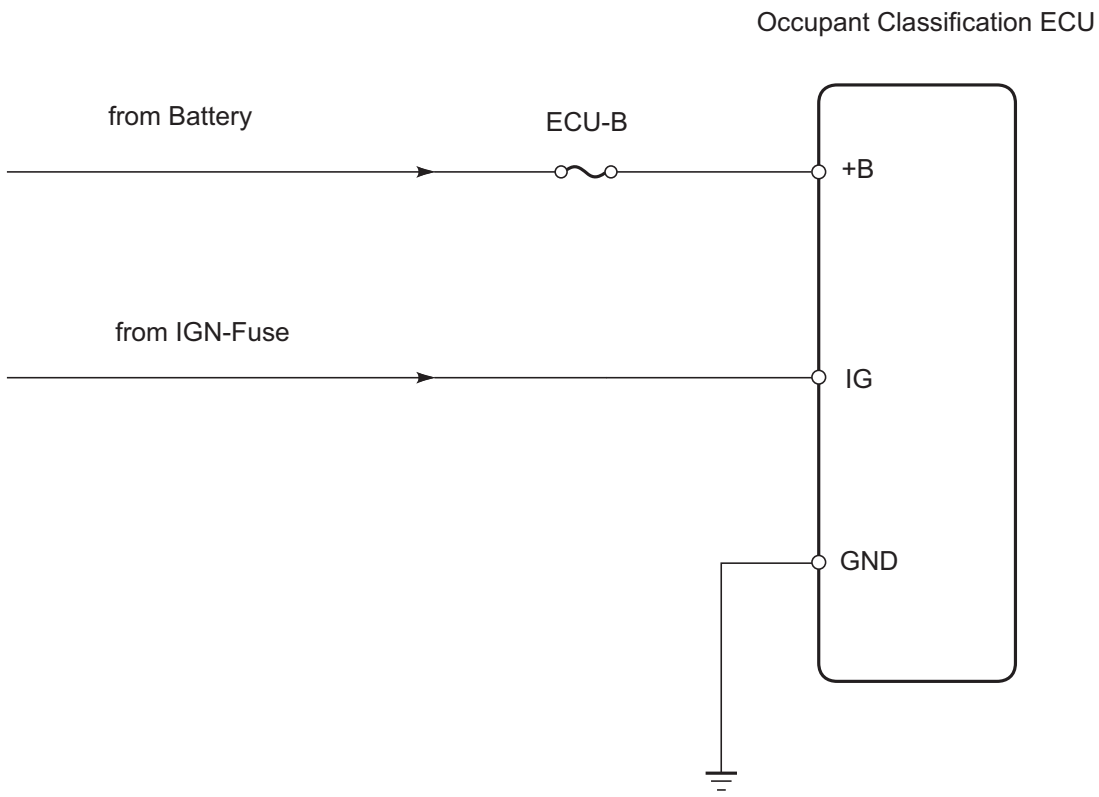
| DTC | B1794 | Open in Occupant Classification ECU Battery Positive Line |
|---|---|---|

## DESCRIPTION

DTC B1794 is set when a malfunction is detected in the occupant classification ECU battery positive line.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1794 | When one of following conditions is met:<br>• Occupant classification ECU circuit malfunction<br>• Occupant classification ECU malfunction<br>• Occupant classification ECU detects short circuit to ground signal in passenger side buckle switch circuit for 2 seconds | • Wire harness<br>• Occupant classification ECU |

## WIRING DIAGRAM

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RS

## INSPECTION PROCEDURE

| 1 | CHECK FOR DTC |
|---|---|

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(c) Turn the ignition switch OFF, and wait for at least 10 seconds.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1794 is not output.**
HINT:
DTCs other than B1794 may be output at this time, but they are not related to this check.

**OK** → **USE SIMULATION METHOD TO CHECK**

**NG**

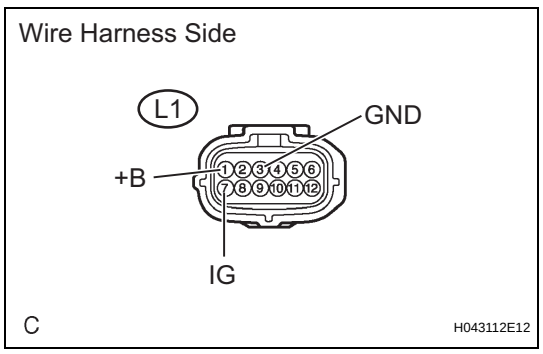
| 2 | CHECK CONNECTION OF CONNECTOR |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Check that the connectors are properly connected to the occupant classification ECU.
**OK:**
**The connectors are properly connected.**

**NG** → **CONNECT CONNECTOR**

**OK**

| 3 | CHECK WIRE HARNESS (SOURCE VOLTAGE) |
|---|---|




(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Disconnect the L1 connector from the occupant classification ECU.
(d) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(e) Measure the voltage of the wire harness side connector.
**Standard voltage**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| L1-1 (+B) - Body ground | Always | 10 to 14 V |
| L1-7 (IG) - Body ground | Ignition switch ON | 10 to 14 V |

RS

(f) Measure the resistance of the wire harness side connector.

**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| L1-3 (GND) - Body ground | Below 1 Ω |

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR (BATTERY - OCCUPANT CLASSIFICATION ECU)**

OK

| 4 | CHECK FOR DTC |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Connect the connectors to the occupant classification ECU.
(d) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(e) Turn the ignition switch ON.
(f) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor.
(g) Turn the ignition switch OFF, and wait for at least 10 seconds.
(h) Turn the ignition switch ON.
(i) Using the intelligent tester, check for DTCs of the occupant classification ECU (see page RS-249).
**OK:**
**DTC B1794 is not output.**
HINT:
DTCs other than B1794 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

| 5 | REPLACE OCCUPANT CLASSIFICATION ECU |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-392).
HINT:
Perform the inspection using parts from a normal vehicle when possible.

NEXT

| 6 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester (with CAN VIM) to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

| 7 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NEXT

| END |
|---|

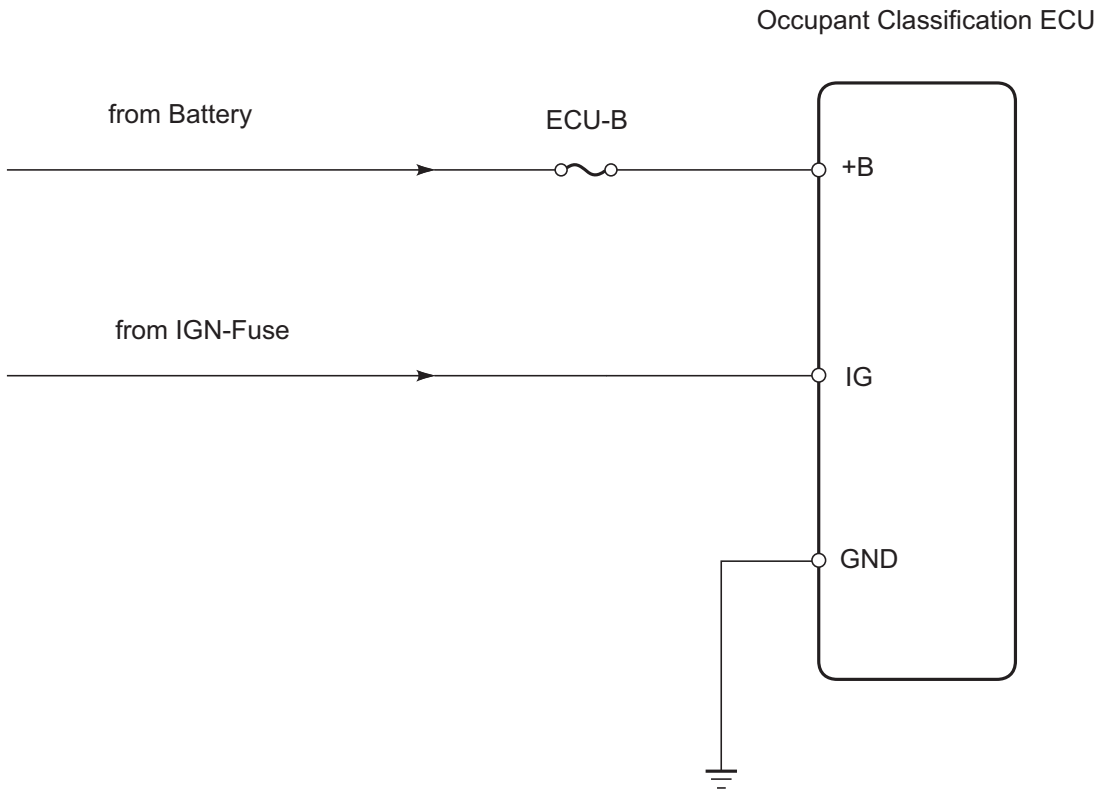
| DTC | B1795 | Occupant Classification ECU Malfunction |
|---|---|---|

## DESCRIPTION

DTC B1795 is recorded when a malfunction is detected in the occupant classification ECU.
Troubleshoot DTC B1771 first when DTC B1771 and B1795 are output simultaneously.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1795 | When one of following conditions is met:<br>• The occupant classification ECU receives the ignition switch OFF to ON signal 50 times in a row when a malfunction occurs in the power circuit for the occupant classification ECU (OFF to ON to OFF should be counted as 1 time).<br>• Occupant classification ECU circuit malfunction<br>• The occupant classification ECU receives a short circuit to ground signal in the passenger side buckle switch circuit for 2 seconds.<br>• Occupant classification ECU malfunction | • Battery<br>• ECU-B fuse<br>• Floor wire No.2<br>• Front seat inner belt RH<br>• Occupant classification ECU |

## WIRING DIAGRAM

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RS

## INSPECTION PROCEDURE

**1 CHECK FOR DTC**

(a) Turn the ignition switch ON, and wait for at least 10 seconds.
(b) Check the DTCs (see page RS-249).
**Result**

| Result | Proceed to |
|---|---|
| DTC B1795 is output. | A |
| DTC B1771 and B1795 are output. | B |

HINT:
DTCs other than DTC B1771 and B1795 may be output at this time, but they are not related to this check.

B → **GO TO DTC B1771**

A

**2 CHECK FUSE (ECU-B)**

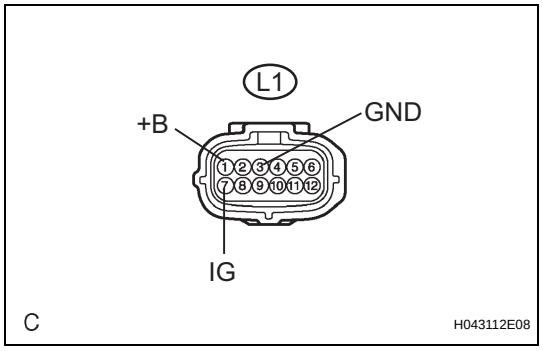
(a) Check the ECU-B fuse from the instrument panel junction block.
(b) Measure the resistance of the fuse.
**Standard resistance:**
**Below 1 Ω**

NG → **REPLACE FUSE**

OK

RS

**3 CHECK WIRE HARNESS (SOURCE VOLTAGE)**




(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Disconnect the No. 2 floor wire connector from the occupant classification ECU.
(d) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
(e) Measure the voltage of the wire harness side connector.
**Standard voltage**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| L1-1 (+B) - Body ground | Always | 10 to 14 V |
| L1-7 (IG) - Body ground | Ignition switch ON | 10 to 14 V |

(f) Turn the ignition switch OFF.
(g) Measure the resistance of the wire harness side connector.
**Standard resistance**

| Tester Connection | Specified Condition |
|---|---|
| L1-3 (GND) - Body ground | Below 1 Ω |

NG → **REPAIR OR REPLACE WIRE HARNESS**

OK

| | |
|---|---|
| **4** | **REPLACE OCCUPANT CLASSIFICATION ECU** |

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-392).
HINT:
Perform the inspection using parts from a normal vehicle if possible.

NEXT

| | |
|---|---|
| **5** | **PERFORM ZERO POINT CALIBRATION** |

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

RS

| | |
|---|---|
| **6** | **PERFORM SENSITIVITY CHECK** |

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NEXT

**END**

| DTC | B1796 | Sleep Operation Failure of Occupant Classification ECU |
|---|---|---|

## DESCRIPTION

During sleep mode, the occupant classification ECU reads the condition of each sensor while the ignition switch is OFF.
In this mode, if the occupant classification ECU detects an internal malfunction, DTC B1796 is output.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1796 | Occupant classification ECU malfunction | Occupant classification ECU |

## INSPECTION PROCEDURE

**1 CHECK FOR DTC**

(a) Turn the ignition switch ON.
(b) Clear the DTCs (see page RS-249).
HINT:
First clear DTCs stored in the occupant classification ECU and then in the center airbag sensor assembly.
(c) Turn the ignition switch OFF, and wait for at least 2 seconds.
(d) Turn the ignition switch ON.
(e) Check the DTCs (see page RS-249).
**OK:**
**DTC B1796 is not output.**
HINT:
DTCs other than DTC B1796 may be output at this time, but they are not related to this check.

OK → **USE SIMULATION METHOD TO CHECK**

NG

**2 REPLACE OCCUPANT CLASSIFICATION ECU**

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Replace the occupant classification ECU (see page RS-392).
HINT:
Perform the inspection using parts from a normal vehicle if possible.

NEXT

**3 PERFORM ZERO POINT CALIBRATION**

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.
(b) Connect the intelligent tester to the DLC3.

(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

| 4 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NEXT

END

# Trouble in Passenger Airbag ON / OFF Indicator

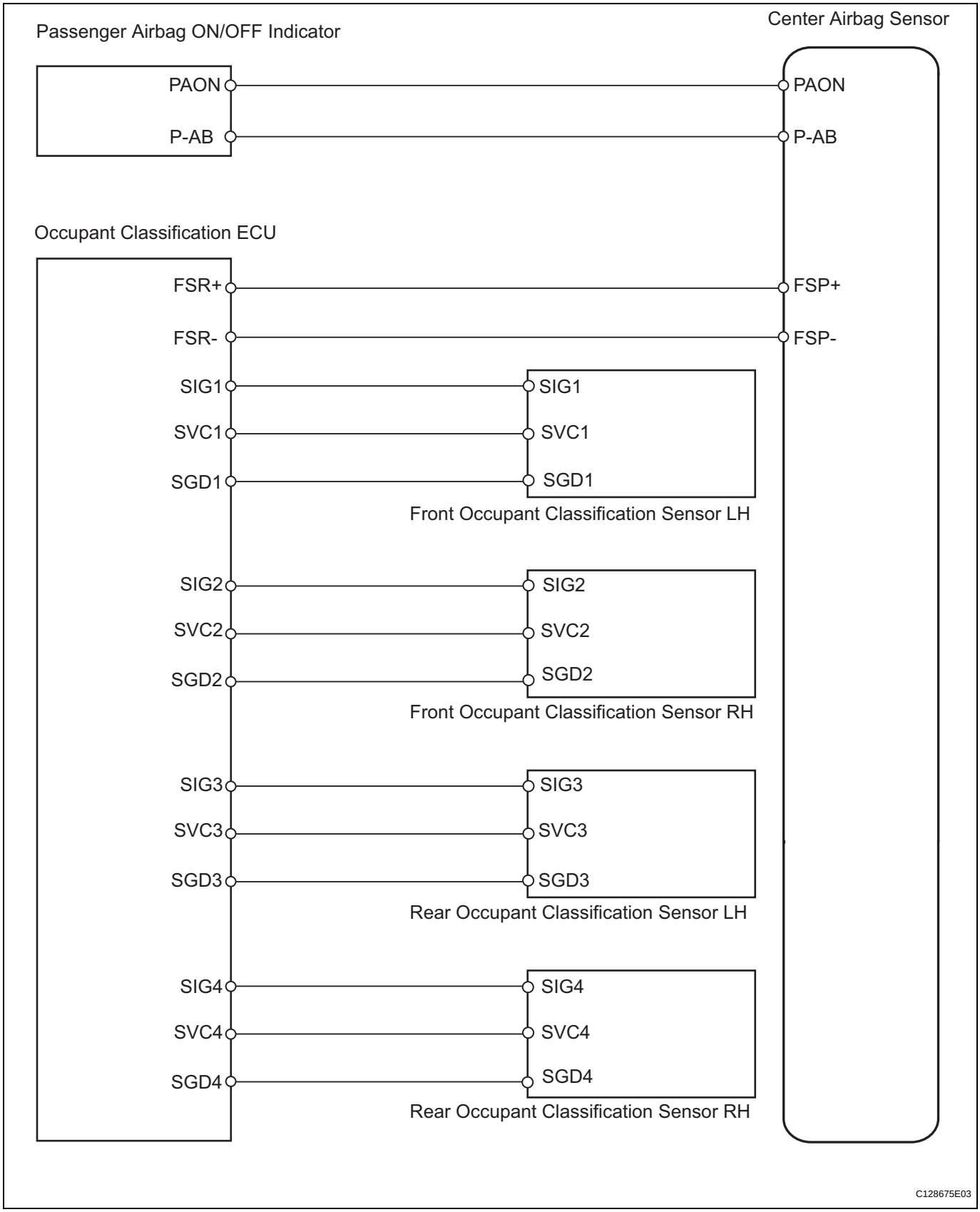
## DESCRIPTION

The occupant classification system detects the front passenger seat condition and then indicates whether the front passenger airbag is activated or not through the passenger airbag ON / OFF indicator illumination.

The passenger airbag ON / OFF indicator illumination changes depending on the front passenger seat condition as shown in the table below.

| Front Passenger Seat Condition | ON Indicator | OFF Indicator |
|---|---|---|
| Adult is seated | ON | OFF |
| Child is seated | OFF | ON |
| Vacant | OFF | OFF |
| Occupant classification system failure | OFF | ON |

## WIRING DIAGRAM




RS

## INSPECTION PROCEDURE

**1 CHECK SRS WARNING LIGHT**

(a) Turn the ignition switch ON, and check the SRS warning light condition.
**OK:**
**The SRS warning light does not come on.**

**NG** → **Go to step 9**

**OK**

**2 CHECK PASSENGER AIRBAG ON/OFF INDICATOR CONDITION**

(a) Turn the ignition switch ON.
(b) Check if the passenger airbag ON / OFF indicator correctly indicates the front passenger seat condition.

**OK**

| Front Passenger Seat Condition | ON Indicator | OFF Indicator |
|---|---|---|
| Adult is seated | ON | OFF |
| Child is seated | OFF | ON |
| Vacant | OFF | OFF |
| Occupant classification system failure | OFF | ON |

**OK** → **END**

**NG**

**3 PERFORM ZERO POINT CALIBRATION**

(a) Turn the ignition switch OFF.
(b) Connect the intelligent tester (with CAN VIM) to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

**NG** → **Go to step 5**

**OK**

**4 PERFORM SENSITIVITY CHECK**

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

**NG** → **Go to step 5**

RS

OK

END

| 5 | RETIGHTEN FRONT SEAT ASSEMBLY RH BOLT |
|---|---|

(a) Turn the ignition switch OFF.
(b) Loosen the 4 installation bolts of the front seat RH.
(c) Tighten the 4 installation bolts of the front seat RH to the specified torque (see page SE-22).
**Torque:**
**37 N*m{ 377 kgf*cm , 27 ft.*lbf }**

NG → **Go to step 8**

OK

| 6 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the intelligent tester (with CAN VIM) to the DLC3.
(b) Turn the ignition switch ON.
(c) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NG → **Go to step 8**

OK

RS

| 7 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NG → **Go to step 8**

OK

| 8 | CHECK CONNECTOR |
|---|---|

(a) Turn the ignition switch OFF.
(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.
(c) Check that the connectors are properly connected to the occupant classification ECU and the 4 occupant classification sensors.

**OK:**

**The connectors are connected.**

(d) Disconnect the connectors from the occupant classification ECU and the 4 occupant classification sensors.

(e) Check that the connectors are not damaged or deformed.

**OK:**

**The connectors are normal.**

**NG** → **REPAIR OR REPLACE WIRE HARNESS AND CONNECTOR**

**OK**

| 9 | CHECK FOR DTC |
|---|---|

(a) Connect the connectors to the occupant classification ECU and the 4 occupant classification sensors.

(b) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.

(c) Turn the ignition switch ON, and wait for at least 60 seconds.

(d) Turn the ignition switch OFF.

(e) Clear the DTCs (see page RS-249).

(f) Turn the ignition switch ON, and wait for at least 60 seconds.

(g) Check the DTCs (see page RS-249).

**OK:**

**DTC is not output.**

**NG** → **REPLACE CENTER AIRBAG SENSOR ASSEMBLY**

**OK**

| 10 | REPLACE OCCUPANT CLASSIFICATION ECU |
|---|---|

(a) Turn the ignition switch OFF.

(b) Disconnect the cable from the negative (-) battery terminal, and wait for at least 90 seconds.

(c) Replace the occupant classification ECU (see page RS-392).

HINT:

Perform the inspection using parts from a normal vehicle if possible.

**NEXT**

| 11 | PERFORM ZERO POINT CALIBRATION |
|---|---|

(a) Connect the cable to the negative (-) battery terminal, and wait for at least 2 seconds.

(b) Connect the intelligent tester (with CAN VIM) to the DLC3.
(c) Turn the ignition switch ON.
(d) Using the intelligent tester, perform the zero point calibration (see page RS-241).
**OK:**
**COMPLETED is displayed.**

NEXT

| 12 | PERFORM SENSITIVITY CHECK |
|---|---|

(a) Using the intelligent tester, perform the sensitivity check (see page RS-241).
**Standard value:**
**27 to 33 kg (59.52 to 72.75 lb)**

NEXT

END